

APPENDIX D
DATA VALIDATION REPORT

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ACRONYMS

B	indicates the analyte was found in the blank as well as the sample
°C	degrees Celsius
CCC	calibration check compounds
CCV	continuing calibration verification
CF	calibration factor
COC	chain of custody
%D	percent difference
DFTPP	decafluorotriphenylphosphine
DNT	dinitrotoluene
DRO	diesel range organics
DQO	data quality objective
GC/MS	gas chromatograph/mass spectrometer
GRO	gasoline range organics
HPLC	high performance liquid chromatography
ICP	Inductively Coupled Plasma
ICV	Initial Calibration Verification
IS	internal standard
J	analytical result is estimated
JOAAP	Joliet Army Ammunition Plant
LCG	Louisville Chemistry Guidelines
LCS	laboratory control sample
MRL	method reporting limit
MS	matrix spike
MS/MSD	matrix spike/matrix spike duplicate
MWH	MWH Americas, Inc.
PARCC	precision, accuracy, representativeness, completeness and comparability
PAHs	polynuclear aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PCN	polychlorinated naphthalene
QAPP	Quality Assurance Project Plan
QC	quality control
R	data is unusable; rejected
RF	response factor
RPD	relative percent difference
RRFs	relative response factors
% RSD	percent relative standard deviation
SD	standard deviation
SOPs	standard operating procedures
SPCCs	system performance check compounds
STL	Severn Trent Laboratory
TA	Test America, Inc.
TPH	total petroleum hydrocarbons
TCLP	Toxicity Characteristic Leaching Procedure
TERC	Total Environmental Restoration Contract
TNT	trinitrotoluene
U	compound or analyte was analyzed for, but not detected at or above the stated limit
UJ	compound or analyte was analyzed for, but not detected, however the sample detection limit is an estimated value
USACE	United States Army Corps of Engineers

ACRONYMS CONTINUED

USEPA	United States Environmental Protection Agency
+	high bias
-	low bias

1.0 INTRODUCTION

This Data Validation Report details the assessment and verification of analytical data collected and generated during activities associated with the SRU2 and SRU3 LAP Facility Operations at the Joliet Army Ammunition Plant (JOAAP), Wilmington, Illinois. Analytical procedures for this project were outlined in the Louisville Chemistry Guidelines (LCG), Version 5 (June 2002) prepared by the United States Army Corps of Engineers (USACE). The laboratory subcontracted for the chemical analyses of the SRU2 and SRU3 LAP samples was Severn Trent Laboratories (STL)/Test America, Inc., University Park, Illinois. STL/TA has been approved for use by USACE. STL/TA's standard operating procedures (SOPs) have been reviewed by the USACE and the United States Environmental Protection Agency (USEPA), and have been approved for use at JOAAP. Work was performed under the Total Environmental Restoration Contract (TERC) DACW27-97-D-0015.

Between July 2006 and October 2008, SRU2 and SRU3 LAP soil and groundwater samples were collected at JOAAP. A summary table, in Appendix A, provides the information regarding the analysis of the samples by STL/TA, including the field sample identification, laboratory sample identification, sample date, sample time, and the analyses requested for each sample collected during the SRU2 and SRU3 LAP sampling event. Copies of chain-of-custody (COC) documents and cooler receipt forms for the samples are included in Appendix B. The analytical results with qualifications are provided in Appendix C. The analyses performed included the following:

- Explosives by USEPA Method SW-846 8330;
- Toxicity Characteristic Leaching Procedure (TCLP) 2,4-dinitrotoluene (DNT) by USEPA Methods SW-846 1311/8330;
- Polynuclear aromatic hydrocarbons (PAHs) by USEPA Method SW-846 8270C;
- Polychlorinated biphenyls (PCBs) by Method SW-846 8082;
- Polychlorinated naphthalene (PCN) by USEPA Method SW-846 8270C;
- Total petroleum hydrocarbons (TPH) diesel range organics (DRO) and gasoline range organics (GRO) by Method SW-846 8015;
- Metals by USEPA Methods SW-846 3050/6010B/7471A; and
- TCLP Lead by USEPA Methods SW-846 1311/6010B.

All analytical methods were referenced from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 (with all subsequent

revisions). All samples were analyzed in accordance with the protocols established in the Quality Assurance Project Plan (QAPP).

Data validation of sample results was performed by MWH Americas, Inc. (MWH). A 100 percent review of the data, which allows for complete independent data review without reconstruction of analytical data, was conducted. Approximately 20 percent (75 samples for explosives, 96 samples for PAHs, 12 samples for PCBs, 17 samples for TPH, and 345 samples for metals) of the total number of samples collected, underwent a full data validation which allowed for complete reconstruction of the chemical analyses. Table 1 provides a list of samples in which a full data validation was conducted. The data were validated in accordance with the analytical methods and the documents entitled:

- i) MWH, December 2001 "Quality Assurance Project Plan";
- ii) USACE, "Louisville Chemistry Guidelines", Version 5 (June 2002).

Non-detected analytes were reported at the quantitation limit with a "U" flag.

An overview of the validation findings are presented in tabular format in Appendix D. The validation verification worksheets are provided in Appendix E, F, G, H, and I, for explosives, PAHs, PCBs, TPH, metals respectively. Data validation flags were utilized in the validation process and the definitions of these qualifier flags are as follows:

- | | |
|----|--|
| U | Indicates the compound or analyte was analyzed for, but not detected at or above the stated limit. |
| J | Indicates an estimated value. |
| UJ | Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value. |
| B | Indicates the analyte was found in the blank as well as the sample. |
| R | Indicates the compound or analyte result was rejected and therefore unusable. |

All flags have been incorporated into the data tables presented in this report (Appendix C).
The results of the data validation are presented in the following subsections.

2.0 DATA VALIDATION RESULTS

This section provides a summary of the laboratory quality control (QC) sample results, which were used to meet the project data quality objectives (DQOs) for the investigation. The following subsections summarize the validation findings in terms of precision, accuracy, representativeness, completeness, and comparability (PARCC) criteria as defined in the QAPP (MWH, December 2001) and the LCG.

2.1 EXPLOSIVES DATA VALIDATION

2.1.1 Initial Calibration

To quantify compounds of interest, calibration of the high performance liquid chromatography (HPLC) over a specific concentration range must be performed. For the explosives, a six-point curve was analyzed to establish the analytical curve/range. Linearity of the calibration curve was assessed using a percent relative standard deviation (%RSD) of 20. If the RSD is greater than 20%, than the linearity of the calibration curve is assessed using correlation coefficient criterion of ≥ 0.995 . The RSDs for explosive initial calibrations ranged from 0.993% to 9.957%. To ensure that compound retention times do not vary over the analysis period, all retention times for initial calibration compounds must fall within the established retention time windows. The retention time window is defined as $\pm 3X$ the standard deviation for the absolute retention times for each standard. The retention times for the explosive analyses illustrated that accurate compound identification was performed.

The initial calibration data for all explosives were verified. Table E-1 shows the recalculation of the calibration factors (CFs), response factors (RFs) and their respective %RSDs. The initial calibration standards were analyzed at the required frequencies and all retention times and linearity criteria were satisfied. The initial calibration recalculations were reviewed and were acceptable. No data was qualified based on the initial calibrations.

2.1.2 Continuing Calibration

To ensure that the calibration of the instrument is valid throughout the sample analysis period, continuing calibration standards are analyzed and evaluated on a regular basis. To evaluate the continued linearity of the calibration the percent deviation (%D) was

calculated for each compound in the continuing calibration standard and evaluated against an acceptance criterion of 15 percent. The %Ds for this data set ranged from 0 to 58.9.

The continuing calibration verification (CCV) CFs and %Ds for the explosive compounds were recalculated and verified. Table E-2 presents the recalculations. The CCV recalculations were reviewed and were acceptable. Continuing calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity with the exception of those presented in Table D-1. Compounds with a high bias (+) %Ds and were not detected in the samples, were not flagged. Compounds with a high bias (+) %Ds and were detected in the samples, were flagged "J".

To ensure that compound retention times do not vary over the analysis period, all retention times for continuing calibration compounds must fall within the established retention time windows. The retention times for the explosive analyses illustrated that accurate compound identification was performed.

A low concentration CCV was also analyzed as a method reporting limit (MRL) QC sample. No data was flagged based on low concentration CCVs not meeting the established acceptance criterion of 30%.

2.1.3 Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and standards analyzed for explosives are spiked with a surrogate compound prior to sample extraction and/or analysis. The surrogate recovery provides a means to evaluate the effects of individual sample matrices on analytical efficiency and are evaluated using method control limits. The surrogate recovery for explosives was verified. Table 2, along with Figure 1 presents the surrogate recovery for the surrogate utilized in the explosive analysis. This figure shows that all of the surrogate recoveries were within ± 3 standard deviations (SDs) with the exception of seven, all were within the acceptance criteria of 50% to 150% for explosives. The mean for the surrogate control chart was 104 with a standard deviation of 8. Surrogate recoveries ranged from 59% to 141%. Table E-3 shows the recalculation of the explosive surrogate. The recalculations were reviewed and the results were acceptable.

2.1.4 Laboratory Control Sample (LCS) Analyses

The LCS serves as a measure of overall analytical performance. LCSs are prepared and analyzed with each sample batch.

The LCS recoveries were within the laboratory control limits of 75% to 125%. Recalculation of the LCSs are provided in Table E-4. The recalculations were reviewed and the results were acceptable with the exceptions presented in Table D-2.

2.1.5 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

MS/MSD samples were prepared and analyzed for each parameter at a frequency of one in 20 samples. The recoveries of MS/MSD analyses are used to assess the analytical accuracy achieved on an individual sample matrix. The relative percent difference (RPD) between the MS and MSD is to assess analytical precision. The QC criterion for MS/MSD recoveries is 50% to 150% and for the RPD is 30. The MS/MSD recoveries showed acceptable accuracy and precision with the exception of those presented in Table D-4. For organic analyses, only the parent samples were qualified for MS/MSDs with recoveries outside the QC criterion. Poor MS/MSD recoveries associated with high primary sample results were not flagged. Also, if a percent recovery was high biased (+) and there was no detection in the associated sample result, no flag was issued.

MS/MSD recovery results were verified through recalculations. Table E-5 presents the recalculations of MS/MSD results. All recalculations were reviewed and results were acceptable with the exception of those presented in Table D-3.

2.1.6 Method Blank Analyses

Method blanks for explosive analysis are prepared from deionized water and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the laboratory procedures.

For this study, method blanks were analyzed at a minimum frequency of one per analytical batch. If target analytes were detected in the blank and an associated investigative sample, the data were evaluated and qualified. Method blank contamination was not found during the explosive analysis.

2.2 POLYNUCLEAR AROMATIC HYDROCARBONS AND POLYCHLORINATED NAPHTHALENE DATA VALADATION

2.2.1 Gas Chromatograph/Mass Spectrometer (GC/MS) Tuning and Mass Calibration

Prior to analysis, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, the PAH/PCN method requires the analysis of the specific tuning compound decafluorotriphenylphosphine (DFTPP). The resulting spectra must meet the criteria cited in the method before analysis is initiated. Analysis of the tuning compound must then be repeated every twelve hours throughout sample analysis to ensure the continued optimization of the instrument.

Instrument tuning data were reviewed. All tuning criteria were met for the analyses, indicating proper optimization of the instrumentation. Tuning compounds were analyzed at the required frequency throughout the PAH/PCN analysis periods.

2.2.2 Initial Calibration

To quantify compounds of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range. The average response factor and relative standard deviation were calculated for each of the eight concentrations. The initial calibration data for several PAH/PCNs were verified. Table F-1 shows the recalculations of the RRFs and percent RSDs for several PAH/PCNs.

The initial calibration data, as well as the recalculations were reviewed against the following criteria:

- i.) The RSD of all target compounds must be less than 30% or the linear-regression correlation coefficient must be equal to or greater than 0.995
- ii.) the five system performance check compounds (SPCC) compounds must meet the methods minimum RRFs;
- iii.) all RRFs must be greater than or equal to 0.05;

- iv.) the six calibration check compounds (CCC) compounds must have an RSD of less than 30%; and RSDs values for all other compounds must not exceed 30%.

The initial calibration data, as well as the recalculations, were reviewed and the following criteria were met.

2.2.3 Continuing Calibration

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours. The CCV RFs and %D for several PAH/PCNs were verified. Table F-2 shows the recalculation of the CCV RFs and %Ds. The calibration standards were analyzed at the required frequency and the results met the following criteria for instrument sensitivity and linearity of response.

The following criteria were employed to evaluate continuing calibration data:

- i) all compounds %D values must not exceed 20

The results of the CCVs met the above criteria for instrument sensitivity, with the exception of those presented in Table D-1.

2.2.4 Internal Standard (IS) Recoveries

To correct for changes in GC/MS response and sensitivity, internal standard compounds are added to investigative samples and quality control samples prior to PAH/PCN analysis. All results are calculated as a ratio of the internal standard response. The criteria by which the internal standard results are assessed are as follows:

- i) internal standard area counts must not vary by more than a factor of two (-50 percent to +150 percent) from the associated initial calibration standard; and
- ii) the retention time of the internal standard must not vary more than ± 30 seconds from the associated initial calibration standard.

All sample results met the above criteria, with the exception of those presented in Table D-4.

2.2.5 Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and standards analyzed for PAH/PCNs are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of individual sample matrices on analytical efficiency and are evaluated using method control limits. Surrogate recoveries were verified for several samples. Table 3, along with Figures 2 through 4 present the surrogate recoveries for the three surrogates utilized in the PAH/PCN analysis. These figures show that the majority of the surrogate recoveries were within ± 3 SD with the exception of one. The means and SDs for the surrogate control charts (Figures 2 through 4) ranged from 64% to 86% and 12 to 16, respectively. All surrogate recoveries met the method criteria of 50% to 150%, with the exceptions presented in Table D-5. Table F-3 shows the recalculation of the PAH/PCN surrogates.

2.2.6 LCS Analyses

The LCS serves as a measure of overall analytical performance. LCSs are prepared and analyzed with each sample batch.

The LCS recoveries were within the method criteria of 70% to 130%, with the exception of those presented in Table D-2. Recalculations of the LCSs are provided in Table F-4. The recalculations were reviewed and acceptable.

2.2.7 MS/MSD Analyses

MS/MSD samples are prepared and analyzed for each parameter at a frequency of one in 20 samples. Not all MS/MSDs were site related. Only site specific MS/MSDs were evaluated. The recoveries of MS/MSD analyses are used to assess the analytical accuracy achieved on individual sample matrix. RPD between the MS and MSD is used to assess analytical precision. The QC criterion for MS/MSD recoveries is 50% to 150% and for the RPD is 30. The MS/MSD recoveries showed acceptable accuracy and precision with the exception of those presented in Table D-3. For organic analyses, only the parent samples were qualified for MS/MSDs with recoveries outside the QC criterion. Recalculations of the MS/MSDs are provided in Table F-5.

2.2.8 Field Duplicates

To assess the analytical and sampling protocol precision, field duplicates were collected and submitted to the laboratory.

Table D-6 presents the RPDs for primary and duplicate samples where both had a detection greater than the reporting limit and no dilutions were performed. The RPDs ranged from 0% to 154%. The poor precision could be a result of the samples being composite samples from five points within the sample location and the non-homogeneity of soil.

2.2.9 Method Blank Analyses

Method blanks are prepared from deionized water and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the laboratory procedures.

For this study, method blanks were analyzed at a minimum frequency of one per analytical batch. If target analytes were detected in the blank and an associated investigative sample, the data were evaluated and qualified. Method blank contamination was not found during the PAH analysis.

2.3 PCB DATA VALIDATION

2.3.1 Initial Calibration

To quantify compounds of interest, calibration of the HPLC over a specific concentration range must be performed. For the PCB, a six-point curve was analyzed to establish the analytical curve/range. Linearity of the calibration curve was assessed using a percent %RSD of 20. If the RSD is greater than 20%, then the linearity of the calibration curve is assessed using correlation coefficient criterion of ≥ 0.995 . The RSDs for PCB initial calibrations ranged from 1.6% to 19.4%. To ensure that compound retention times do not vary over the analysis period, all retention times for initial calibration compounds must fall within the established retention time windows. The retention time window is defined as $\pm 3X$ the standard deviation for the absolute retention times for each standard. The retention times for the PCB analyses illustrated that accurate compound identification was performed.

The initial calibration data for all PCBs were verified. Table G-1 shows the recalculation of the CFs, RFs and their respective %RSDs. The initial calibration standards were analyzed at the required frequencies and all retention times and linearity criteria were satisfied. The initial calibration recalculations were reviewed and were acceptable. No data was qualified based on the initial calibrations.

2.3.2 Continuing Calibration

To ensure that the calibration of the instrument is valid throughout the sample analysis period, continuing calibration standards are analyzed and evaluated on a regular basis. To evaluate the continued linearity of the calibration the %D was calculated for each compound in the continuing calibration standard and evaluated against an acceptance criterion of 15 percent. The %Ds for this data set ranged from 0.2 to 17.2.

The CCV CFs and %Ds for the PCB compounds were recalculated and verified. Table G-2 presents the recalculations. The CCV recalculations were reviewed and were acceptable. Continuing calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity.

To ensure that compound retention times do not vary over the analysis period, all retention times for continuing calibration compounds must fall within the established retention time windows. The retention times for the PCB analyses illustrated that accurate compound identification was performed.

A low concentration CCV was also analyzed as a MRL QC sample. No data was flagged based on low concentration CCVs not meeting the established acceptance criterion of 30%.

2.3.3 Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and standards analyzed for PCB are spiked with a surrogate compound prior to sample extraction and/or analysis. The surrogate recovery provides a means to evaluate the effects of individual sample matrices on analytical efficiency and are evaluated using method control limits. The surrogate recovery for PCBs was verified. Table 4, along with Figures 5 and 6 presents the surrogate recovery for the surrogates utilized in the PCB analysis. This figure shows that all of the surrogate recoveries were within ± 3 SDs with the exception of one. The

means and SDs for the surrogate control charts (Figures 5 and 6) ranged from 87% to 100% and 13 to 23, respectively. All surrogate recoveries met the method criteria of 50% to 150%, with the exceptions presented in Table D-5. Table G-3 shows the recalculation of the PCB surrogate. The recalculations were reviewed and the results were acceptable with the exceptions presented in Table D-5.

2.3.4 LCS Analyses

The LCS serves as a measure of overall analytical performance. LCSs are prepared and analyzed with each sample batch.

The LCS recoveries were within the laboratory control limits of 75% to 125%. Recalculation of the LCSs are provided in Table G-4. All of the recalculations were reviewed and acceptable.

2.3.5 MS/MSD Analyses

MS/MSD samples were prepared and analyzed for each parameter at a frequency of one in 20 samples. The recoveries of MS/MSD analyses are used to assess the analytical accuracy achieved on an individual sample matrix. The RPD between the MS and MSD is to assess analytical precision. The QC criterion for MS/MSD recoveries is 50% to 150% and for the RPD is 30. The MS/MSD recoveries showed acceptable accuracy and precision. Table G-5 presents the recalculations of MS/MSD results. All recalculations were reviewed and were acceptable.

2.3.6 Method Blank Analyses

Method blanks for PCB analysis are prepared from deionized water and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the laboratory procedures.

For this study, method blanks were analyzed at a minimum frequency of one per analytical batch. If target analytes were detected in the blank and an associated investigative sample, the data were evaluated and qualified. Method blank contamination was not found during the PCB analysis.

2.3.7 Reporting Limits

Some of the soil samples associated with the PCB analysis received a sulfuric acid cleanup in order to reduce the matrix interferences. These samples were diluted due to the sample matrix and therefore the reporting limits were adjusted to reflect these necessary dilutions. The adjusted reporting limits, however, did not always meet the remedial goals. The laboratory conducted a visual inspection of the chromatograms and noted that a non-target peak pattern was present; however the pattern did not match any of the Aroclors.

2.4 TPH DATA VALIDATION

2.4.1 Initial Calibration

To quantify compounds of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range. The average RF and RSD were calculated for each of the eight concentrations. The initial calibration data for TPH were verified. Table H-1 shows the recalculations of the RRFs and percent RSDs for TPH. The initial calibration data, as well as the recalculations were reviewed against the following criteria: the RSD of all compounds must be less than 15% or the linear-regression correlation coefficient must be equal to or greater than 0.99

The criteria for initial calibration were met.

2.4.2 Continuing Calibration

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours. The CCV RFs and %D for TPH were verified. The %Ds for the continuing calibrations that were recalculated ranged from 2.0% to 9.8%. Table H-2 shows the recalculation of the CCV RFs and %Ds. The calibration standards were analyzed at the required frequency and the results met the following criteria for instrument sensitivity and linearity of response. The CCV recalculations were reviewed and were acceptable.

The following criteria was employed to evaluate continuing calibration data:

- the compounds must have an RPD less than or equal to 20

2.4.3 Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and standards analyzed for TPH are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of individual sample matrices on analytical efficiency and are evaluated using method control limits. Surrogate recoveries were verified for several samples. Table 4, along with Figures 7 through 10 presents the surrogate recoveries for the four surrogates utilized in the TPH analysis. These figures show that the majority of the surrogate recoveries were within ± 3 SD with the exception of three. The means for the surrogate control charts (Figures 7 through 10) ranged from 64 to 105. All surrogate recoveries met the method criteria of 50% to 150% with the exceptions presented in Table D-5. Tables H-3 shows the recalculation of the TPH surrogates. All recalculations were reviewed and were acceptable.

2.4.4 LCS Analyses

The LCS serves as a measure of overall analytical performance. LCSs are prepared and analyzed with each sample batch.

The LCS recoveries were within the laboratory control limits of 75% to 125. Recalculations of the LCSs are provided in Table H-4. The recalculations were reviewed and acceptable.

2.4.5 MS/MSD Analyses

MS/MSD samples are prepared and analyzed for each parameter at a frequency of one in 20 samples. The recoveries of MS/MSD analyses are used to assess the analytical accuracy achieved on individual sample matrix. The RPD between the MS and MSD is used to assess analytical precision. The quality control criterion for MS/MSD recoveries is 70% to 130% and for the RPD is 30. Recalculations of the MS/MSDs are provided in

Table H-5. The recalculations were reviewed and acceptable with the exception of those presented in Table D-3.

2.4.6 Method Blank Analyses

Method blanks are prepared from deionized water and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the laboratory procedures.

For this study, method blanks were analyzed at a minimum frequency of one per analytical batch. If target analytes were detected in the blank and an associated investigative sample, the data were evaluated and qualified. Method blank contamination was not found during the TPH analysis.

2.5 METALS DATA VALIDATION

2.5.1 Initial Calibration

Initial calibration of the instruments ensures that they are capable of producing satisfactory quantitative data at the beginning of a series of analyses. For Inductively Coupled Plasma (ICP) analyses, a calibration blank and three standards must be analyzed to establish the analytical curve. Resulting correlation coefficients for the metals curves must be at least 0.995. The correlation coefficients for the metals analysis ranged from 0.99843 to 1.000. Table I-1 provides the recalculations of the correlation coefficients.

After calibration, an initial calibration verification (ICV) standard must be analyzed to verify the analytical accuracy of the calibration curves. The metals recovery for the analyses of the ICVs were within 90% to 110%. Table I-2 provides the recalculation of the percent recoveries for the metals ICVs.

Upon review of the data, it was determined that all metals calibration curves and ICVs were analyzed at the proper frequencies and met the criteria.

2.5.2 Continuing Calibration

To ensure that instrument calibration is acceptable throughout the sample analysis period, CCV standards were analyzed on a regular basis. A CCV is acceptable if the analyte

recoveries are within the specified control limits of 90% to 110% for metals. The CCVs for the metals analyses ranged from 94% to 108%. Table I-3 presents the recalculation of the CCVs. The metals CCVs were analyzed at the proper frequency and all recoveries reported were within the specified limits.

2.5.3 LCS Analyses

The LCS serves as a measure of overall analytical performance. LCSs are prepared and analyzed with each sample batch and must be within the laboratory control limits of 75% to 125%. The LCS recoveries ranged from 81% to 110% for the data associated with this data validation. Recalculation of the LCSs are provided in Table I-4. The recalculations were reviewed and acceptable.

2.5.4 Matrix Spike (MS) and Laboratory Duplicate Analyses

MS and laboratory duplicate samples were prepared and analyzed for metals at a frequency of one in 20 samples. The recovery of the MS analysis is used to assess the analytical accuracy achieved on individual sample matrix. The quality control criterion for the MS recovery is 75% to 125%. The quality control criterion for the laboratory duplicate analysis was an RPD of 20. The MS recoveries showed acceptable accuracy and precision with the exceptions presented in Table D-7. The MS recoveries ranged from 1% to 10,616%. The laboratory duplicate RPDs were acceptable. For MS recoveries outside the quality control criterion in which the sample result was greater than four times the spike amount added, data was not qualified. As appropriate, post digestion spikes (PDS) were analyzed on samples in which the MS recovery was outside of acceptance criteria. Results were acceptable.

MS recovery results for the metals analyses were verified through recalculations. Table I-5 presents the recalculations of MS/MSD results. All recalculations were reviewed and were acceptable.

2.5.5 Field Duplicates

To assess the analytical and sampling protocol precision, field duplicates were collected and submitted to the laboratory.

Table D-8 presents the RPDs for primary and duplicate samples where both had a detection greater than the reporting limit and no dilutions were performed. The RPDs ranged from 0% to 181%. The poor precision could be a result of the samples being composite samples from five points within the sample location and the non-homogeneity of soil.

2.5.6 Method Blank Analyses

Method blanks for the metals analysis were prepared from deionized water and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the laboratory procedures.

For this study, method blanks were analyzed at a minimum frequency of one per analytical batch. If target analytes were detected in the blank and an associated investigative sample, the data were evaluated and qualified. Method blank contamination is presented in Table D-9. Sample results that were greater than 10X the amount detected in their associated method blank were not flagged.

2.6 DATA REPRESENTATIVENESS

Representativeness is a qualitative evaluation of whether the data represent actual environmental conditions. Representativeness was evaluated using holding time and preservation criteria. Holding times reflect the length of time after sample collection that a sample or extract remains representative of environmental conditions. Depending on the analysis, either one or two holding times were evaluated. For those analyses that do not include a sample extraction step, only one holding time was evaluated (the length of time between sample collection and analysis). For analyses that require sample extraction prior to analysis, two holding times were evaluated: 1) the length of time from sampling until extraction and 2) the length of time from extraction to analysis. Holding times were compared to standard method-specific holding times accepted by the USEPA. All holding times that are within acceptance criteria are considered representative. Those holding times outside of USEPA acceptance criteria are qualitatively evaluated to determine the exceedence on sample representativeness.

Representativeness was also evaluated by the temperature at which the laboratory received samples.

2.6.1 Sample Holding Times

All sample extractions and analyses were performed within the specified holding times,

2.6.2 Sample/Cooler Receipt

An attempt was made to cool samples to the recommended 4 degrees Celsius ($^{\circ}\text{C}$) ($\pm 2^{\circ}\text{C}$) after collection. All COCs/sample receipt forms (Appendix B) show the temperature at which samples were received at the laboratory.

2.7 DATA COMPLETENESS AND COMPARABILITY

Completeness of data was evaluated by assuring that all the analytical requests were met, samples were received in the proper condition, and all analyses were performed within the appropriate holding times.

To ensure the comparability of the data, field procedures were standardized by adhering to the SOPs. The laboratory followed USEPA analytical methods, which utilized standard units of measurement.

The data were also evaluated for the comparability of detection limits. The majority of project-required reporting limits were met; however, some samples required dilutions in order to quantify compounds within the linear range of the analytical instrument or to eliminate matrix interferences observed when the samples were analyzed neat. As a result, these detection limits were elevated. The need for dilution of samples does not have an impact on the data quality or usability.

Approximately 20% of the data results were verified through recalculation of results. Sample calculations were performed to verify the results reported by the laboratory were accurate. Appendix J provides the recalculation of the explosives and TCLP 2,4-DNT samples. Appendix K provides the recalculation of PAH results. Appendix L provides the recalculation of PCB results. Appendix M provides the recalculation of TPH results. Appendix N provides the recalculation of metals results. The recalculations verified that sample results are acceptable as reported.

The field and analytical procedures for this investigation were followed as described in the QAPP. Based on the assessment detailed in the foregoing sections, the data summarized in Appendix C are acceptable as qualified, resulting in **100%** usability for explosives, PAHs, PCBs and TPH; and **99%** usability for metals for this project.

3.0 REFERENCES

MWH, 2001. "Quality Assurance Project Plan (QAPP) of the Final Basewide Chemical Data Quality Management Plan, Part I." December 2001.

USACE, 2002. "Louisville Chemistry Guidelines (LCG)" Version 5 (June 2002).

USEPA, 1986. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" Third Edition. November 1986.

TABLES

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 13)

Sample Delivery Group	Sample Identification	Analysis
247884	JPM3-ITF-AF48(2)	Explosives
249144	JPM3-CP7-16	Explosives
249144	JPM3-CP7-21	Explosives
249144	JPM3-CP7-23	Explosives
249398	JPM3ITFCP1-7(1)	Explosives
249398	JPM3ITFCP1-8(1)	Explosives
249398	JPM3ITFCP1-9(1)	Explosives
249398	JPM3ITFCP1-16(1)	Explosives
249398	JPM3ITFCP1-17(1)	Explosives
249603	JPL2-CP31(1)	Explosives
249603	JPL2-CP41(1)	Explosives
249603	JPL2-CP43(1)	Explosives
249944	JPM3-ITF-AF250(3)	Explosives
249944	JPM3-ITF-AF253(3)	Explosives
250253	JPL2-AP36(0.5)	Explosives
250253	JPL2-AF30(1)	Explosives
250253	JPL2-AF31(1)	Explosives
250253	JPL2-AP47(0.5)	Explosives
250253	JPL2-AF32(1)	Explosives
250253	JPL2-CP63(2)	Explosives
250274	JPL2-CP74(0.5)	Explosives
250274	JPL2-CP75(0.5)	Explosives
250274	JPL2-CP76(0.5)	Explosives
250274	JPL2-CP77(0.5)	Explosives
250285	JPL2-AF38(2)	Explosives
250285	JPL2-AP62(0.5)	Explosives
250285	JPL2-AF39(2)	Explosives
250285	JPL2-AP66(0.5)	Explosives
250293	JPL2-AP73-D(0.5)	Explosives
250293	JPL2-AP74-D(0.5)	Explosives
250332	JPL2-AF41(2)	Explosives
250332	JPL2-AP79(0.5)	Explosives
250332	JPL2-AP82(0.5)	Explosives
250332	JPL2-AF42(2)	Explosives
250332	JPL2-AF43(2)	Explosives
250340	JPL2-AP91(0.5)	Explosives
250340	JPL2-AP93(0.5)	Explosives
250224	JPM3-ITF-AF49B(1)	Explosives
250224	JPM3-ITF-AF227B(1)	Explosives
500-4599	JPWR367-2W-2	Explosives
500-4599	JPWR367-2W-12	Explosives
500-4599	JPWR367-2W-14	Explosives
500-4599	JPWR367-2W-4-D	Explosives

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 13)

Sample Delivery Group	Sample Identification	Analysis
500-4599	JPWR367-2W-8-D	Explosives
500-4602	JPWR368-2E-3	Explosives
500-4602	JPWR368-2E-4	Explosives
500-4602	JPWR368-2E-6	Explosives
500-4602	JPWR368-2E-7	Explosives
500-4661	JPWR-369-1W-1	Explosives
500-4661	JPWR-369-1W-2	Explosives
500-4661	JPWR-369-1W-3	Explosives
500-4661	JPWR-369-1W-5	Explosives
500-4661	JPWR-369-1W-7	Explosives
500-4661	JPWR-369-1W-8	Explosives
500-4661	JPWR-369-1W-10	Explosives
500-4662	JPWR370-1E-2	Explosives
500-4662	JPWR370-1E-9	Explosives
500-4662	JPWR370-1E-11	Explosives
500-4662	JPWR370-1E-12	Explosives
500-4662	JPWR370-1E-13-D	Explosives
500-5635	JPL3-GENFILL	Explosives
500-5681	JPL3-Blast Pit (2)	Explosives
500-5719	JPL3-STOCKPILE-1(0)	Explosives
500-5720	JPM4-Sediment-8/2	Explosives
500-6713	JPL3-Concrete	Explosives
500-6650	JPL3-AP25(0.5)	Explosives
500-6650	JPL3-AP26(0.5)	Explosives
500-6900	JPL2-CP96(0.5)	Explosives
500-6900	JPL2-CP98(0.5)	Explosives
500-7047	JPL3-SP4(0.5)	Explosives
249477	JPM3-ITF-CP1-18(1)	Explosives
249776	JPM3-LEAD A 21 DE LAGOON EXCAVATION	Explosives
500-5718	JPM4-SB-1-RAW-8/2	Explosives
500-6089	JPL3-Stormwater-US#6	Explosives
500-6089	JPL3-Stormwater-DS#6	Explosives
247700	JPM3-ITF-AF4	PAHs
247700	JPM3-ITF-AF5	PAHs
247700	JPM3-ITF-AF6	PAHs
247748	JPM3-ITF-AP8(1)	PAHs
247748	JPM3-ITF-AP9(1)	PAHs
247748	JPM3-ITF-AF11(1)	PAHs
247748	JPM3-ITF-AF13(2)	PAHs
247836	JPM3-ITF-AP16(1)	PAHs
247836	JPM3-ITF-AF39(2)	PAHs
247811	JPM3-ITF-AP13(1)	PAHs
247811	JPM3-ITF-AP14(1)	PAHs

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 13)

Sample Delivery Group	Sample Identification	Analysis
247811	JPM3-ITF-AF30(2)	PAHs
247811	JPM3-ITF-AF31(2)	PAHs
247811	JPM3-ITF-AF35(2)	PAHs
247811	JPM3-ITF-AP13(1)D	PAHs
247884	JPM3-ITF-AP23(1)	PAHs
247884	JPM3-ITF-AP24(1)	PAHs
247884	JPM3-ITF-AF49(2)	PAHs
247884	JPM3-ITF-AF54(2)	PAHs
247954	JPM3-ITF-AP32(1)	PAHs
247954	JPM3-ITF-AP33(1)	PAHs
247954	JPM3-ITF-AP34(1)	PAHs
247954	JPM3-ITF-AP35(1)	PAHs
247954	JPM3-ITF-AP34(1)-D	PAHs
247954	JPM3-ITF-AF57(2)	PAHs
247954	JPM3-ITF-AP30(2)	PAHs
247954	JPM3-ITF-AP31(2)	PAHs
248048	JPM3-ITF-AP36(1)	PAHs
248048	JPM3-ITF-AP37(1)	PAHs
248048	JPM3-ITF-AP38(1)	PAHs
248048	JPM3-ITF-AP71(2)	PAHs
248065	JPM3-ITF-AF81(2)	PAHs
248065	JPM3-ITF-AF82(2)	PAHs
248160	JPM3-ITF-AF95(2)	PAHs
248160	JPM3-ITF-AF97(2)	PAHs
248182	JPM3-ITF-AF103(2)	PAHs
248190	JPM3-ITF-AF111(2)	PAHs
248208	JPM3-ITF-AP50(1)	PAHs
248208	JPM3-ITF-AP51(1)	PAHs
248233	JPM3-ITF-AF118(2)	PAHs
248233	JPM3-ITF-AF119(2)	PAHs
248248	JPM3-ITF-AP61(1)	PAHs
248248	JPM3-ITF-AP63(1)	PAHs
248271	JPM3-ITF-AF125(2)	PAHs
248271	JPM3-ITF-AF126(2)	PAHs
248289	JPM3-ITF-AP64(1)	PAHs
248289	JPM3-ITF-AP65(1)	PAHs
248301	JPM3-ITF-AP68(1)	PAHs
248301	JPM3-ITF-AP69(1)	PAHs
248327	JPM3-ITF-AF143(2)	PAHs
248327	JPM3-ITF-AF145(2)	PAHs
248423	JPM3-ITF-AF158(2)	PAHs
248439	JPM3-ITF-AF167(2)	PAHs
248537	JPM3-ITF-AP77(1)	PAHs

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 4 of 13)

Sample Delivery Group	Sample Identification	Analysis
248537	JPM3-ITF-AP78(1)	PAHs
248537	JPM3-ITF-AF168(2)	PAHs
248926	JPM3-ITF-AF169	PAHs
248926	JPM3-ITF-AF178	PAHs
248981	JPM3-ITF-AF189(2)	PAHs
248981	JPM3-ITF-AF190(2)	PAHs
249025	JPM3-ITF-AF192(2)	PAHs
249025	JPM3-ITF-AF193(2)	PAHs
249025	JPM3-ITF-AF196(2)	PAHs
249177	JPM3-ITF-AF213(2)	PAHs
249177	JPM3-ITF-AF217(2)	PAHs
249177	JPM3-ITF-AF218(2)	PAHs
249177	JPM3-ITF-AF219(2)	PAHs
249177	JPM3-ITF-AF221(2)	PAHs
249439	JPM3-ITF-AF235(2)	PAHs
249439	JPM3-ITF-AF238(2)	PAHs
249487	JPM3-ITF-AF244(2)	PAHs
249487	JPM3-ITF-AF245(2)	PAHs
249487	JPM3-ITF-AF244(2)	PAHs
250183	JPM3-ITF-A101(1)	PAHs
500-4270	JPL2-PF2(2)	PAHs
500-4270	JPL2-PF3(2)	PAHs
500-4317	JPL2-AST-TF2(4)	PAHs
500-4317	JPL2-AST-TP3(0.5)	PAHs
500-4472	JPL2-TP4(1)	PAHs
500-4472	JPL2-TP6(1)	PAHs
500-4472	JPL2-TF3(5)	PAHs
500-4427	JPL2-PF6(4)	PAHs
500-5265	JPL5-PCN-1(3)	PAHs
500-5265	JPL5-PCN-2(3)	PAHs
500-5265	JPL5-PCN-3(3)	PAHs
500-5265	JPL5-PCN-4(3)	PAHs
500-5265	JPL5-PCN-5(3)	PAHs
500-5285	JPL5-PCN-16(3)	PAHs
500-5285	JPL5-PCN-17(3)	PAHs
500-5285	JPL5-PCN-18(3)	PAHs
500-5285	JPL5-PCN-1(3)	PAHs
500-5285	JPL5-PCN-2(3)	PAHs
500-5954	JPL5-PCN2-24(5)	PAHs
500-5954	JPL5-PCN2-26(5)	PAHs
500-14347	JPL5-RS-AP1(0.5)	PAHs
500-14347	JPL5-RS-AP4(0.5)	PAHs
250005	JPL5-I1(1)	PCBs

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Sample Delivery Group	Sample Identification	Analysis
250012	JPL5-I1(1)	PCBs
249966	JPL5-A1 (1)	PCBs
249972	JPL5-D5(1)	PCBs
249981	JPL5-E1(1)	PCBs
249992	JPL5-G2(1)	PCBs
500-4792	JPL5-AP1(0.5)	PCBs
500-4954	JPL5-1(3)	PCBs
500-4954	JP-L5-6(3)	PCBs
500-5265	JPL5-PCN-6(3)	PCBs
500-5306	JPL5-14(3)	PCBs
500-5933	JPL5-PCN2-9(5)	PCBs
248084	JPM3-ITF-AF86(2)	TPH
248084	JPM3-ITF-AF87(2)	TPH
248307	JPM3-ITF-133(2)	TPH
248307	JPM3-ITF-133(2)	TPH
248379	JPM3-ITF-AF154(2)	TPH
250224	JPM3-ITF-AF209B(1)	TPH
500-4317	JPL2-AST-TF2(4)	TPH
500-4427	JPL2-PF5(4)	TPH
500-4472	JPL2-TP4(1)	TPH
500-5501	JPL5-AP34(0.5)	TPH
500-5501	JPL5-AF10(3)	TPH
500-5501	JPL5-AF20(3)	TPH
500-6612	JPL5-SP1(1)	TPH
500-6332	JPL5-AP42(0.5)	TPH
500-5499	JPL5-AP10(0.5)	TPH
500-5499	JPL5-AP19(0.5)	TPH
500-5499	JPL5-AP31(0.5)	TPH
247739	JPM3-OTF-AP19(1)	Metals
247739	JPM3-OTF-AP19(1)D	Metals
247739	JPM3-OTF-AP22(1)	Metals
247748	JPM3-ITF-AP8(1)	Metals
247748	JPM3-ITF-AP9(1)	Metals
247748	JPM3-ITF-AF11(1)	Metals
247748	JPM3-ITF-AF11(3)	Metals
247748	JPM3-ITF-AF11(3)	Metals
247748	JPM3-ITF-AF12(2)	Metals
247884	JPM3-ITF-AF46(2)	Metals
247884	JPM3-ITF-AF48(2)	Metals
247884	JPM3-ITF-AF49(2)	Metals
248048	JPM3-ITF-AF75(2)	Metals
248301	JPM3-ITF-AF140(2)	Metals
248307	JPM3-ITF-AF130(2)	Metals

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Sample Delivery Group	Sample Identification	Analysis
248926	JPM3-ITF-AF171	Metals
248927	JPM12-DITCH-CP12	Metals
248927	JPM12-DITCH-CP5	Metals
248927	JPM12-DITCH-CP2	Metals
248981	JPM3-ITF-AF180(2)	Metals
248981	JPM3-ITF-AF181(2)	Metals
248981	JPM3-ITF-AF183(2)	Metals
248981	JPM3-ITF-AF184(2)	Metals
249025	JPM3-ITF-AF197(2)	Metals
249049	JPM4-CP12	Metals
249049	JPM4-CP18	Metals
249049	JPM4-CP22	Metals
249049	JPM4-CP26	Metals
249049	JPM4-CP4	Metals
249049	JPM4-CP6	Metals
249049	JPM4-CP7	Metals
249072	JPM12-CP16	Metals
249144	JPM3-CP7-17	Metals
249144	JPM3-CP7-21	Metals
249145	JPM4-LAGOON-1(1)	Metals
249145	JPM4-LAGOON-1(4)	Metals
249177	JPM3-ITF-AF213(2)	Metals
249177	JPM3-ITF-AF215(2)	Metals
249177	JPM3-ITF-AF217(2)	Metals
249220	JPM4-CP4	Metals
249220	JPM4-CP5(2)	Metals
249221	JPM4-CP31(.5)	Metals
249240	JPM3-ITF-AF231(2)	Metals
249398	JPM3-ITF-CP1-2(1)	Metals
249398	JPM3-ITF-CP1-3(1)	Metals
249398	JPM3-ITF-CP1-4(1)	Metals
249398	JPM3-ITF-CP1-7(1)	Metals
249398	JPM3-ITF-CP1-21(1)	Metals
249439	JPM3-ITF-AF236(2)	Metals
249510	JPM3-ITF-CP-1-22(.5)	Metals
249511	JPM12-CP8(.5)	Metals
249544	JPM12-AP1(1)	Metals
249544	JPM12-AP4(1)	Metals
249563	JPM12-AP11(1)	Metals
249563	JPM12-AP12(1)	Metals
249576	JPM12--AF5(2)	Metals
249602	JPL2-ASH	Metals
249616	JPM12-AP44(1)	Metals

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Sample Delivery Group	Sample Identification	Analysis
249623	JPM12-AP45(1)	Metals
249623	JPM12-AP47(1)	Metals
249674	JPM12-AP69(1)	Metals
249743	JPM12-AP83(1)	Metals
249754	JPM4-AF1(4)	Metals
249777	JPM4-AP4(1)	Metals
249777	JPM4-AF4(2)	Metals
249777	JPM4-AF5(2)	Metals
249944	JPM3-ITF-AP98(1)	Metals
249944	JPM3-ITF-AF253(3)	Metals
250183	JPM3-ITF-AF260(2)	Metals
250224	JPM3-ITF-AF49B(1)	Metals
250224	JPM3-ITF-AF215B(1)	Metals
250263	JPL2-AP53(1)	Metals
250263	JPL2-AP55(1)	Metals
250373	JPL2-TOTAL METAL-(PROFILE)	Metals
250387	JPL2-AP95(0.5)	Metals
250399	JPL2-AF45(2)	Metals
250415	JPL2-AP98(0.5)	Metals
250415	JPL2-AF48(2)	Metals
250418	JPL2-AP100(0.5)	Metals
250429	JPL2-AF51(3)-D	Metals
250431	JPL2-AF53(2)-D	Metals
250051	JPL3-CP1(1)	Metals
250051	JPL3-CP9(1)	Metals
250051	JPL3-CP12(1)	Metals
250051	JPL3-CP17(1)	Metals
250051	JPL3-CP21(1)	Metals
250164	JPM12-AP86(1)	Metals
250165	JPM3-ITF-AF255(2)	Metals
250443	JPL2-AP105(0.5)	Metals
250443	JPL2-AP108(0.5)	Metals
250472	JPL23A-AF1(6)	Metals
250472	JPL23A-AP3(1)-D	Metals
250479	JPL23A-AP5(1)-D	Metals
250483	JPL23A-AP9(1)	Metals
250504	JPL23A-AP14(4)	Metals
250504	JPL23A-AF4(6)	Metals
250523	JPL23A-AP15(1)	Metals
250523	JPL23A-AP17(1)-D	Metals
250534	JPL23A-AP21(1)	Metals
250536	JPL23A-AP26(4)	Metals
250536	JPL23A-AF9(6)	Metals

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 8 of 13)

Sample Delivery Group	Sample Identification	Analysis
250548	JPM12-STOCKPILE-5(0)	Metals
250551	JPL2-AS(0.5)	Metals
250557	JPL23A-AP31(1)	Metals
250560	JPL23A-AF11(6)	Metals
250573	JPL23A-SP4(0.5)	Metals
250595	JPL2-AP109(0.5)	Metals
250597	JPL2-AF57(2)	Metals
250597	JPL2-AF57(2)-D	Metals
250603	JPL2-AP115(0.5)	Metals
250606	JPL2-SP4(0)	Metals
500-4287-1	JPL2-AP121(0.5)	Metals
500-4270-2	JPL2-AP117(0.5)	Metals
500-4317-4	JPL2-AP122(0.5)	Metals
500-4317-4	JPL2-AST-TP1(0.5)	Metals
500-4362-1	JPL2-CP93(0.5)	Metals
500-4427-1	JPL2-AP123(0.5)	Metals
500-4447-1	JPL23A-SP5(1)	Metals
500-4472-4	JPL2-AP125(0.5)	Metals
500-4472-4	JPL2-SP11(1)	Metals
500-4561-1	JPL2-AP129(1)	Metals
500-4561-1	JPL2-AF62(10)	Metals
500-4599-2	JPWR367-2W-1	Metals
500-4599-2	JPWR367-2W-7	Metals
500-4599-2	JPWR367-2W-11	Metals
500-4602-2	JPWR368-2E-1	Metals
500-4602-2	JPWR368-2E-8	Metals
500-4602-2	JPWR368-2E-16	Metals
500-4630-1	JPL2-SP12(0.5)	Metals
500-4661-2	JPWR-369-1W-1	Metals
500-4661-2	JPWR-369-1W-7	Metals
500-4661-2	JPWR-369-1W-14-D	Metals
500-4662-2	JPWR370-1E-2	Metals
500-4662-2	JPWR370-1E-8	Metals
500-4662-2	JPWR370-1E-16	Metals
500-4685-1	JPL5-AP1(0.5)	Metals
500-4685-1	JPL5-AF2(1)	Metals
500-4792-2	JPL5-AP1(0.5)	Metals
500-4792-2	JPL5-AP3(0.5)	Metals
500-4814-1	JPM4-AF4(1)	Metals
500-4814-1	JPM4-AP5(0.5)	Metals
500-4870-1	JPL5-AF5(3)	Metals
500-4870-1	JPL5-AP6(0.5)	Metals
500-4954-1	JPL5-1(3)	Metals

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Sample Delivery Group	Sample Identification	Analysis
500-4954-1	JPL5-7(3)	Metals
500-4954-1	JPL5-12(3)	Metals
500-5122-1	JPM4-AF7(1)	Metals
500-5265-1	JPL5-PCN-4(3)	Metals
500-5265-1	JPL5-PCN-10(3)	Metals
500-5285-1	JPL5-PCN-11(3)	Metals
500-5285-1	JPL5-PCN-18(3)	Metals
500-5285-1	JPL5-PCN-25(3)	Metals
500-5286-1	JPM4-AP15(0.5)	Metals
500-5286-1	JPM4-AP19(0.5)	Metals
500-5306-1	JPL5-14(3)	Metals
500-5347-1	JPL3-DITCH-1(0)	Metals
500-5352-1	JPL3-BARREL-White Substance	Metals
500-5499-1	JPL5-AP10(0.5)	Metals
500-5499-1	JPL5-AP14(0.5)	Metals
500-5499-1	JPL5-AP19(0.5)	Metals
500-5499-1	JPL5-AP24(0.5)	Metals
500-5499-1	JPL5-AP28(0.5)	Metals
500-5501-1	JPL5-AP34(0.5)	Metals
500-5501-1	JPL5-AF9(3)	Metals
500-5501-1	JPL5-AF15(3)	Metals
500-5501-1	JPL5-AF21(3)	Metals
500-5658-1	JPM4-AF9(4)	Metals
500-5681-1	JPL3-BLAST PIT(2)	Metals
500-5719-1	JPL3-STOCKPILE-1(0)	Metals
500-5720-1	JPM4-SEDIMENT-8/2	Metals
500-5767-1	JPM4-AP23(0.5)	Metals
500-5767-1	JPM4-AP27(0.5)	Metals
500-5767-1	JPM4-AP30(2)	Metals
500-5933-1	JPL5-PCN2-1(5)	Metals
500-5933-1	JPL5-PCN2-5(5)	Metals
500-5954-1	JPL5-PCN2-11(5)	Metals
500-5954-1	JPL5-PCN2-15(5)	Metals
500-5954-1	JPL5-PCN2-20(5)	Metals
500-5954-1	JPL5-PCN2-24(5)	Metals
500-5975-1	JPM4-AP32(0.5)	Metals
500-5975-1	JPM4-AP36(0.5)	Metals
500-5975-1	JPM4-AP41(0.5)	Metals
500-5975-1	JPM4-AP47(0.5)	Metals
500-6015-1	JPL5-AP1(0.5)	Metals
500-6017-1	JPL5-AP37(0.5)	Metals
500-6018-1	JPL5-AF24(4)	Metals
500-6078-1	JPL5-AP41(0.5)	Metals

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Sample Delivery Group	Sample Identification	Analysis
500-6079-1	JPL2-SP17(1)	Metals
500-6111-1	JPM4-AP50(0.5)	Metals
500-6111-1	JPM4-AP57(0.5)	Metals
500-6133-1	JPL2-AP137(0.5)	Metals
500-6237-1	JPL5-AF27(5)	Metals
500-6262-1	JPL2-AP147(0.5)	Metals
500-6238-1	JPL2-AP139(1)	Metals
500-6238-1	JPL2-AP142(8)	Metals
500-6592-1	JPL3-AP12(1)	Metals
500-6592-1	JPL3-AP17(1)	Metals
500-6592-1	JPL3-AF10(1)	Metals
500-6592-1	JPL3-AF16(1)	Metals
500-6112-1	JPL5-SP1(1)	Metals
500-6332-1	JPL5-AP42(0.5)	Metals
500-6332-1	JPL5-AF28(2)	Metals
500-6332-1	JPL5-AP30(6)	Metals
500-6412-1	JPM4-AP60(0.5)	Metals
500-6444-1	JPL5-AF31(3)	Metals
500-6467-1	JPL5-AP48(0.5)	Metals
500-6503-1	JPM4-AP63(0.5)	Metals
500-6506-1	JPL3-AP1(0.5)	Metals
500-6506-1	JPL3-AP3(0.5)	Metals
500-6506-1	JPL3-AP11(0.5)	Metals
500-6506-1	JPL3-AF4(2)	Metals
500-6513-1	JPL5-AP51(0.5)	Metals
500-6550-1	JPL5-AP52(0.5)	Metals
500-6621-1	JPM4-POST-SB2	Metals
500-6622-1	JPL5-AF1(2)	Metals
500-6622-1	JPL5-CR-AP2(0.5)	Metals
500-6650-1	JPL3-AP24(0.5)	Metals
500-6650-1	JPL3-AP29(0.5)	Metals
500-6651-1	JPL3-AP20(0.5)	Metals
500-6651-1	JPL3-AP29(0.5)	Metals
500-6687-1	JPM4-AP64(0.5)	Metals
500-6713-1	JPL3-CONCRETE	Metals
500-6714-1	JPL3-AP30(0.5)	Metals
500-6743-1	JPL3-AP33(0.5)	Metals
500-6812-1	JPL3-AF25(2)	Metals
500-6812-1	JPL3-AF26(2)	Metals
500-6900-1	JPL2-CP95(0.5)	Metals
500-7047-1	JPL3-SP1(0.5)	Metals
500-7047-1	JPL3-SP5(0.5)	Metals
500-7026-1	JPM4-DEMO DEBRIS-100507	Metals

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Sample Delivery Group	Sample Identification	Analysis
500-7145-1	JPM4-POST-SB1-NW	Metals
500-7513-1	JPL2-AP149(0.5)	Metals
500-7513-1	JPL2-AF65(1)	Metals
500-14347	JPL5-RS-AP1(0.5)	Metals
500-14347	JPL5-RS-AP2(0.5)	Metals
500-14347	JPL5-RS-AP3(0.5)	Metals
248312	JPM3-ITF-AP2	TCLP Metals
248312	JPM3-ITF-AP3	TCLP Metals
248312	JPM3-ITF-AP4	TCLP Metals
248312	JPM3-ITF-AP44(1)	TCLP Metals
248312	JPM3-ITF-AF87(2)	TCLP Metals
248135	JPM3-ITF-AF75(2)	TCLP Metals
248160	JPM3-ITF-AF97(2)	TCLP Metals
248182	JPM3-ITF-AF103(2)	TCLP Metals
248208	JPM3-ITF-AP51(1)	TCLP Metals
248208	JPM3-ITF-AP54(1)	TCLP Metals
248233	JPM3-ITF-AF119(2)-D	TCLP Metals
248248	JPM3-ITF-AP60(1)	TCLP Metals
248271	JPM3-ITF-AF126(2)	TCLP Metals
248301	JPM3-ITF-AP68(1)	TCLP Metals
248315	JPM3-ITF-AF22(2)	TCLP Metals
248357	JPM3-ITF-AF148(2)	TCLP Metals
248423	JPM3-ITF-AF160(2)	TCLP Metals
248454	JPM3-ITF-AP74(1)	TCLP Metals
248537	JPM3-ITF-AP77(1)	TCLP Metals
248926	JPM3-ITF-AF173	TCLP Metals
248927	JPM12-DITCH-CP6	TCLP Metals
248927	JPM12-DITCH-CP8	TCLP Metals
249025	JPM3-ITF-AF195(2)	TCLP Metals
249072	JPM3-ITF-AF207(2)	TCLP Metals
249106	JPM3-ITF-AF200(2)	TCLP Metals
249117	JPM12-DITCH-CP12	TCLP Metals
249117	JPM4-CP12	TCLP Metals
249117	JPM4-CP13	TCLP Metals
249144	JPM3-CP7-18	TCLP Metals
249144	JPM3-CP7-22	TCLP Metals
249145	JPM4-LAGOON-1(1)	TCLP Metals
249145	JPM4-LAGOON-2(1)	TCLP Metals
249220	JPM4-CP4(1)	TCLP Metals
249220	JPM4-CP5(1)	TCLP Metals
249477	JPM3-ITF-AF236(2)	TCLP Metals
249221	JPM4-CP31(.5)	TCLP Metals
249239	JPM3-ITF-AP90(1)	TCLP Metals

TCLP - Toxicity Characteristic Leaching Procedure
 PAHs - polynuclear aromatic hydrocarbons
 PCBs - polychlorinated biphenyls

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Sample Delivery Group	Sample Identification	Analysis
249240	JPM3-ITF-AF223(2)	TCLP Metals
249240	JPM3-ITF-AF226(2)	TCLP Metals
249276	JPM3-ITF-AF231(2)	TCLP Metals
249398	JPM3-ITF-CP1-1(1)	TCLP Metals
249398	JPM3-ITF-CP1-2(1)	TCLP Metals
249398	JPM3-ITF-CP1-5(1)	TCLP Metals
249398	JPM3-ITF-CP1-6(1)	TCLP Metals
249439	JPM3-ITF-AF235(2)	TCLP Metals
249439	JPM3-ITF-AF239(2)	TCLP Metals
249487	JPM3-ITF-AF245(2)	TCLP Metals
249510	JPM3-ITF-CP-1-22(.5)	TCLP Metals
249511	JPM12-CP9(.5)	TCLP Metals
249544	JPM12-AP1(1)	TCLP Metals
249544	JPM12-AP5(1)	TCLP Metals
249563	JPM12-AP24(1)	TCLP Metals
249563	JPM12-AP11(1)	TCLP Metals
249576	JPM12-AF5(2)	TCLP Metals
249602	JPL2-ASH	TCLP Metals
249603	JPL2-CP26(1)	TCLP Metals
249616	JPM12-AP31(1)	TCLP Metals
249616	JPM12-AP34(1)	TCLP Metals
249623	JPM12-AP45(1)	TCLP Metals
249623	JPM12-AP46(1)	TCLP Metals
249634	JPM12-AP56(1)	TCLP Metals
249645	JPM12-AP65(1)	TCLP Metals
249674	JPM12-AP69(1)	TCLP Metals
249743	JPM12-AP82(1)	TCLP Metals
249754	JPM4-AP3(1)	TCLP Metals
249776	JPM4-LEAD A21 DE LAGOON EXCAVATION	TCLP Metals
249777	JPM4-AF6(2)	TCLP Metals
249777	JPM4-AF4(2)	TCLP Metals
249895	JPM12-AP84(1)	TCLP Metals
249895	JPM12-AP85(1)	TCLP Metals
249945	JPM3-STOCKPILE-TCLP	TCLP Metals
249973	JPM3-ITF-AF250(3)	TCLP Metals
250023	JPM12-HUMP2(1)	TCLP Metals
250056	JPM3-ITF-AF254(3)	TCLP Metals
250104	JPL3-CP1(1)	TCLP Metals
250183	JPM3-ITF-AF259(2)	TCLP Metals
250192	JPM12-AP86(1)	TCLP Metals
250263	JPL2-AP55(1)	TCLP Metals
250415	JPL2-AP99(0.5)	TCLP Metals
250472	JPL23A-AP1(1)	TCLP Metals

TCLP - Toxicity Characteristic Leaching Procedure
 PAHs - polynuclear aromatic hydrocarbons
 PCBs - polychlorinated biphenyls

Table 1

Sample Identification for Data Validation

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 13 of 13)

Sample Delivery Group	Sample Identification	Analysis
250473	JPL23A-WATER	TCLP Metals
250541	JPL23A-AP17(1)	TCLP Metals
250548	JPM12-STOCKPILE-1(0)	TCLP Metals
250561	JPM12-STOCKPILE-1(0)	TCLP Metals
250586	JPL23A-SP2(0.5)	TCLP Metals
500-4598-2	JPM4-EXCAVATION WATER	TCLP Metals
500-5122-1	JPM4-AF7(1)	TCLP Metals
500-5286-2	JPM4-AP15(0.5)	TCLP Metals
500-5286-2	JPM4-AP20(0.5)	TCLP Metals
500-5529-1	JPL3-DITCH-1(0)	TCLP Metals
500-5427-1	JPL2-STORMWATER-US#5	TCLP Metals
500-5658-1	JPM4-AF9(4)	TCLP Metals
500-5718-1	JPM4-SB-1-RAW-8/2	TCLP Metals
500-5767-1	JPM4-AP21(0.5)	TCLP Metals
500-5767-1	JPM4-AP23(0.5)	TCLP Metals
500-5767-1	JPM4-AP30(2)	TCLP Metals
500-5974-1	JPM4-AP26(2)	TCLP Metals
500-6015-1	JPL5-AP1(0.5)	TCLP Metals
500-6053-1	JPM4-AP32(0.5)	TCLP Metals
500-6091-1	JPL3-TOPSOIL	TCLP Metals
500-6111-1	JPM4-AP50(0.5)	TCLP Metals
500-6111-1	JPM4-AP57(0.5)	TCLP Metals
500-6235-1	JPL5-SP4(1)	TCLP Metals
500-6088-1	JPM4-STORMWATER-US#6	TCLP Metals
500-6089-1	JPL3-STORMWATER-US#6	TCLP Metals
500-6750-1	JPL3-AP28(0.5)	TCLP Metals

TCLP - Toxicity Characteristic Leaching Procedure
 PAHs - polynuclear aromatic hydrocarbons
 PCBs - polychlorinated biphenyls

Table 2

Surrogate Recoveries for Explosives

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Sample Identification	SDG	1,2-Dinitrobenzene % Recovery
JPM3-ITF-AF46(2)	247884	108
JPM3-ITF-AF47(2)	247884	110
JPM3-ITF-AF48(2)	247884	114
JPM3-ITF-AF49(2)	247884	107
JPM3-ITF-AF51(2)	247884	110
JPM3-ITF-AF52(2)	247884	102
JPM3-ITF-AF53(2)	247884	107
JPM3-ITF-AF54(2)	247884	109
JPM3-ITF-AF55(2)	247884	108
JPM3-ITF-AF193(2)	249025	102
JPM3-CP7-16	249144	100
JPM3-CP7-17	249144	103
JPM3-CP7-18	249144	120
JPM3-CP7-19	249144	116
JPM3-CP7-20	249144	121
JPM3-CP7-21	249144	101
JPM3-CP7-22	249144	108
JPM3-CP7-23	249144	106
JPM3-CP7-18	249183	92
JPM3ITFCP1-4(1)	249398	96
JPM3ITFCP1-5(1)	249398	95
JPM3ITFCP1-6(1)	249398	99
JPM3ITFCP1-7(1)	249398	101
JPM3ITFCP1-8(1)	249398	103
JPM3ITFCP1-9(1)	249398	114
JPM3ITFCP1-16(1)	249398	113
JPM3ITFCP1-17(1)	249398	89
JPM3ITFCP1-18(1)	249398	102
JPM3-ITF-CP1-18(1)	249477	112
JPL2-ASH	249602	103
JPL2-CP31(1)	249603	105
JPL2-CP37(1)	249603	104
JPL2-CP38(1)	249603	102
JPL2-CP39(1)	249603	59
JPL2-CP41(1)	249603	97
JPL2-CP42(1)	249603	57
JPL2-CP43(1)	249603	100
JPM3-LEAD A 21 DE LAGOON EXCAVATION	249776	101
JPM3-ITF-AP98(1)	249944	102
JPM3-ITF-AP99(1)	249944	103
JPM3-ITF-AF249(3)	249944	102
JPM3-ITF-AF250(3)	249944	105
JPM3-ITF-AF251(3)	249944	102
JPM3-ITF-AF252(3)	249944	103

I - interference

SDG - sample delivery group

Table 2

Surrogate Recoveries for Explosives

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 6)

Sample Identification	SDG	1,2-Dinitrobenzene % Recovery
JPM3-ITF-AF253(3)	249944	104
JPM3-ITF-AF254(3)	249944	107
JPL5-L1(1)	250012	103
JPL5-L2(1)	250012	106
JPL5-L3(1)	250012	102
JPL5-L4(1)	250012	123
JPL5-L5(1)	250012	100
JPM3-ITF-AP255(2)	250165	102
JPM3-ITF-AP256(2)	250165	103
JPM3-ITF-AF49B(1)	250224	96
JPM3-ITF-AF227B(1)	250224	102
JPL2-AP35(1)	250253	103
JPL2-AF29(2)	250253	104
JPL2-AP36(0.5)	250253	105
JPL2-AP37(0.5)	250253	109
JPL2-AP38(0.5)	250253	101
JPL2-AP39(0.5)	250253	111
JPL2-AF30(1)	250253	114
JPL2-AP40(0.5)	250253	114
JPL2-AP41(0.5)	250253	115
JPL2-AP42(0.5)	250253	115
JPL2-AP43(0.5)	250253	109
JPL2-AF31(1)	250253	112
JPL2-AP45(0.5)	250253	109
JPL2-AP46(0.5)	250253	99
JPL2-AP47(0.5)	250253	108
JPL2-AF32(1)	250253	110
JPL2-AP48(0.5)	250253	113
JPL2-AP49(0.5)	250253	106
JPL2-AP51(0.5)	250253	105
JPL2-AF33(1)	250253	108
JPL2-CP61(2)	250253	108
JPL2-CP62(2)	250253	109
JPL2-CP63(2)	250253	107
JPL2-CP64(2)	250253	106
JPL2-CP65(2)	250253	108
JPL2-CP66(2)	250253	105
JPL2-CP67(2)	250253	102
JPL2-CP68(2)	250253	105
JPL2-CP69(8)	250253	101
JPL2-CP70(8)	250253	107
JPL2-CP71(8)	250253	102
JPL2-CP72(8)	250253	103
JPL2-AP52(0.5)	250253	106

I - interference

SDG - sample delivery group

Table 2

Surrogate Recoveries for Explosives

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 6)

Sample Identification	SDG	1,2-Dinitrobenzene % Recovery
JPL2-AP22(1)	250262	101
JPL2-AP23(1)	250262	102
JPL2-AF19(2)	250262	99
JPL2-AF20(2)	250262	103
JPL2-AF25(2)	250262	99
JPL2-AP34(1)	250262	105
JPL2-AF28(2)	250262	101
JPL2-CP73(0.5)	250274	112
JPL2-CP74(0.5)	250274	114
JPL2-CP75(0.5)	250274	114
JPL2-CP76(0.5)	250274	113
JPL2-CP77(0.5)	250274	110
JPL2-CP78(0.5)	250274	D
JPL2-CP79(0.5)	250274	112
JPL2-CP80(0.5)	250274	113
JPL2-CP81(0.5)	250274	114
JPL2-CP82(0.5)	250274	113
JPL2-CP83(0.5)	250274	122
JPL2-CP85(0.5)	250274	113
JPL2-CP87(0.5)	250274	114
JPL2-CP88(0.5)	250274	112
JPL2-CP89(0.5)	250274	115
JPL2-CP92(0.5)	250274	114
JPL2-AP56(0.5)	250285	141
JPL2-AP57(0.5)	250285	120
JPL2-AP58(0.5)	250285	111
JPL2-AP59(0.5)	250285	111
JPL2-AP61(0.5)	250285	110
JPL2-AF37(2)	250285	130
JPL2-AF38(2)	250285	111
JPL2-AP62(0.5)	250285	114
JPL2-AP63(0.5)	250285	114
JPL2-AP64(0.5)	250285	120
JPL2-AP65(0.5)	250285	119
JPL2-AF39(2)	250285	109
JPL2-AP66(0.5)	250285	110
JPL2-AP67(0.5)	250285	115
JPL2-AP68(0.5)	250285	117
JPL2-AF40(2)	250285	112
JPL2-AP70(0.5)	250293	109
JPL2-AP71(0.5)	250293	109
JPL2-AP72(0.5)	250293	108
JPL2-AP73(0.5)	250293	108
JPL2-AP74(0.5)	250293	108

I - interference

SDG - sample delivery group

Table 2

Surrogate Recoveries for Explosives

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 4 of 6)

Sample Identification	SDG	1,2-Dinitrobenzene % Recovery
JPL2-AP73-D(0.5)	250293	104
JPL2-AP74-D(0.5)	250293	104
JPL2-AP75(0.5)	250332	106
JPL2-AF41(2)	250332	105
JPL2-AP79(0.5)	250332	104
JPL2-AP80(0.5)	250332	115
JPL2-AP82(0.5)	250332	103
JPL2-AF42(2)	250332	105
JPL2-AP83(0.5)	250332	102
JPL2-AP84(0.5)	250332	104
JPL2-AP85(0.5)	250332	105
JPL2-AP86(0.5)	250332	103
JPL2-AP87(0.5)	250332	102
JPL2-AF43(2)	250332	103
JPL2-AP88(0.5)	250332	106
JPL2-AP89(0.5)	250332	104
JPL2-AP90(0.5)	250332	102
JPL2-AP91(0.5)	250340	102
JPL2-AP92(0.5)	250340	105
JPL2-AP93(0.5)	250340	103
JPL2-AP94(0.5)	250378	108
JPL2-AP94(0.5)	250387	108
JPL2-SP1(0)	250401	108
JPL2-SP2(0)	250401	114
JPL2-SP3(0)	250401	110
JPL2-SP4(1)	250418	111
JPWR367-2W-1	500-4599	104
JPWR367-2W-2	500-4599	105
JPWR367-2W-4	500-4599	103
JPWR367-2W-5	500-4599	106
JPWR367-2W-7	500-4599	107
JPWR367-2W-8	500-4599	104
JPWR367-2W-10	500-4599	103
JPWR367-2W-11	500-4599	102
JPWR367-2W-12	500-4599	104
JPWR367-2W-14	500-4599	102
JPWR367-2W-15	500-4599	104
JPWR367-2W-16	500-4599	103
JPWR367-2W-4-D	500-4599	102
JPWR367-2W-8-D	500-4599	103
JPWR368-2E-1	500-4602	103
JPWR368-2E-3	500-4602	103
JPWR368-2E-4	500-4602	100
JPWR368-2E-6	500-4602	100

I - interference

SDG - sample delivery group

Table 2

Surrogate Recoveries for Explosives

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 5 of 6)

Sample Identification	SDG	1,2-Dinitrobenzene % Recovery
JPWR368-2E-7	500-4602	102
JPWR368-2E-8	500-4602	103
JPWR368-2E-9	500-4602	101
JPWR368-2E-11	500-4602	101
JPWR368-2E-12	500-4602	105
JPWR368-2E-13	500-4602	101
JPWR368-2E-15	500-4602	102
JPWR368-2E-16	500-4602	101
JPWR368-2E-9-D	500-4602	100
JPWR368-2E-12-D	500-4602	100
JPWR-369-1W-1	500-4661	101
JPWR-369-1W-2	500-4661	106
JPWR-369-1W-3	500-4661	97
JPWR-369-1W-5	500-4661	96
JPWR-369-1W-7	500-4661	102
JPWR-369-1W-8	500-4661	99
JPWR-369-1W-10	500-4661	95
JPWR-369-1W-11	500-4661	95
JPWR-369-1W-12	500-4661	95
JPWR-369-1W-13	500-4661	97
JPWR-369-1W-14	500-4661	96
JPWR-369-1W-16	500-4661	92
JPWR-369-1W-5-D	500-4661	95
JPWR-369-1W-14-D	500-4661	101
JPWR370-1E-2	500-4662	98
JPWR370-1E-3	500-4662	102
JPWR370-1E-5	500-4662	98
JPWR370-1E-6	500-4662	101
JPWR370-1E-8	500-4662	102
JPWR370-1E-9	500-4662	99
JPWR370-1E-11	500-4662	101
JPWR370-1E-12	500-4662	97
JPWR370-1E-13	500-4662	99
JPWR370-1E-14	500-4662	98
JPWR370-1E-15	500-4662	98
JPWR370-1E-16	500-4662	97
JPWR370-1E-13-D	500-4662	99
JPWR370-1E-15-D	500-4662	100
JPL2-Stormwater-US#5	500-5427	69
JPL3-Stormwater-US#5	500-5427	75
JPL3-GENFILL	500-5635	95
JPL3-Topsoil	500-5635	99
JPL3-Blast Pit (2)	500-5681	101
JPM4-SB-1-RAW-8/2	500-5718	66

I - interference

SDG - sample delivery group

Table 2

Surrogate Recoveries for Explosives

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 6 of 6)

Sample Identification	SDG	1,2-Dinitrobenzene % Recovery
JPL3-STOCKPILE-1(0)	500-5719	95
JPL3-STOCKPILE-2(0)	500-5719	95
JPM4-Sediment-8/2	500-5720	94
JPM4-STORMWATER-US#6	500-6088	102
JPM4-STORMWATER-DS#6	500-6088	107
JPL3-Stormwater-US#6	500-6089	108
JPL3-Stormwater-DS#6	500-6089	99
JPL3-AP24(0.5)	500-6650	107
JPL3-AP25(0.5)	500-6650	109
JPL3-AP26(0.5)	500-6650	106
JPL3-AP27(0.5)	500-6650	106
JPL3-AP28(0.5)	500-6650	107
JPL3-AP29(0.5)	500-6650	108
JPL3-AF21(1)	500-6650	107
JPL3-AF22(1)	500-6650	107
JPL3-AF23(1)	500-6650	105
JPL3-AF24(1)	500-6650	107
JPL3-AP20(0.5)	500-6651	107
JPL3-AP21(0.5)	500-6651	106
JPL3-AP22(0.5)	500-6651	106
JPL3-AP23(0.5)	500-6651	107
JPL3-AF17(1)	500-6651	107
JPL3-AF18(1)	500-6651	107
JPL3-AF19(1)	500-6651	107
JPL3-AF20(1)	500-6651	106
JPL3-Concrete	500-6713	109
JPL3-AP32(0.5)	500-6714	108
JPL2-CP95(0.5)	500-6900	100
JPL2-CP96(0.5)	500-6900	99
JPL2-CP97(0.5)	500-6900	98
JPL2-CP98(0.5)	500-6900	99
JPM4-Demo Debris	500-7026	98
JPL3-SP1(0.5)	500-7047	97
JPL3-SP2(0.5)	500-7047	98
JPL3-SP3(0.5)	500-7047	99
JPL3-SP4(0.5)	500-7047	99
JPL3-SP5(0.5)	500-7047	101
JPL3-SP6(0.5)	500-7047	97
JP-BorrowSource Clay 1	500-7048	106
JPM4 POST SB1 NN	500-7145	107
JPM4 POST SB1 NE	500-7145	105
JPM4 POST SB1 SN	500-7145	105
JPM4 POST SB1 SE	500-7145	106

I - interference

SDG - sample delivery group

Table 3

Surrogate Recoveries for PAHs

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 9)

Sample Identification	SDG	2-Fluorobiphenyl	Nitrobenzene-d5	Terphenyl-d14
JPM3-ITF-CP1(0.5)	247532	67	67	83
JPM3-ITF-CP2(0.5)	247532	85	42	100
JPM3-ITF-CP3(0.5)	247532	75	73	87
JPM3-ITF-CP4(0.5)	247532	64	65	69
JPM3-ITF-CP5(0.5)	247532	70	78	84
JPM3-ITF-CP6(0.5)	247532	63	55	81
JPM3-ITF-CP7(0.5)	247532	71	60	90
JPM3-ITF-CP8(0.5)	247532	75	43	87
JPM3-ITF-CP9(0.5)	247532	65	49	87
JPM3-ITF-CP10(0.5)	247532	72	52	87
JPM3-ITF-CP11(0.5)	247532	74	47	98
JPM3-ITF-CP12(0.5)	247532	76	47	98
JPM3-ITF-CP13(0.5)	247532	68	48	82
JPM3-ITF-CP14(0.5)	247532	77	57	92
JPM3-ITF-CP15(0.5)	247532	83	61	106
JPM3-ITF-CP16(0.5)	247532	61	61	68
JPM3-ITF-CP17(0.5)	247532	72	59	93
JPM3-ITF-CP18(0.5)	247532	84	71	105
JPM3-ITF-CP19(0.5)	247532	86	53	103
JPM3-ITF-CP20(0.5)	247532	55	54	71
JPM3-ITF-CP21(0.5)	247532	D	D	D
JPM3-ITF-CP22(0.5)	247532	52	55	56
JPM3-ITF-CP23(0.5)	247532	73	70	86
JPM3-ITF-CP24(0.5)	247532	76	67	89
JPM3-ITF-CP25(0.5)	247532	70	65	79
JPM3-ITF-AF1	247700	74	66	99
JPM3-ITF-AF2	247700	74	72	113
JPM3-ITF-AF3	247700	91	87	102
JPM3-ITF-AF4	247700	78	70	100
JPM3-ITF-AF5	247700	85	73	107
JPM3-ITF-AF6	247700	70	78	106
JPM3-ITF-AF7	247700	70	68	99
JPM3-ITF-AF8	247700	69	65	94
JPM3-ITF-AF9	247700	58	65	112
JPM3-ITF-AF10	247700	76	73	108
JPM3-ITF-AP1	247700	93	86	113
JPM3-ITF-AP2	247700	81	75	94
JPM3-ITF-AP3	247700	76	69	99
JPM3-ITF-AP4	247700	83	75	104
JPM3-ITF-AP5	247700	65	63	104
JPM3-ITF-AP8(1)	247748	77	68	73
JPM3-ITF-AP9(1)	247748	79	75	99
JPM3-ITF-AF11(1)	247748	72	71	96
JPM3-ITF-AF11(3)	247748	74	68	83
JPM3-ITF-AF12(2)	247748	66	64	75
JPM3-ITF-AF13(2)	247748	78	73	80
JPM3-ITF-AF14(2)	247748	72	71	89
JPM3-ITF-AF15(2)	247748	76	74	90
JPM3-ITF-AF16(2)	247748	53	67	67
JPM3-ITF-AF17(2)	247748	71	70	87

D - diluted out

SDG - sample delivery group

PAHs - polynuclear aromatic hydrocarbons

Table 3

Surrogate Recoveries for PAHs

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 9)

Sample Identification	SDG	2-Fluorobiphenyl	Nitrobenzene-d5	Terphenyl-d14
JPM3-ITF-AF19(2)	247748	82	64	77
JPM3-ITF-AF20(2)	247748	73	68	90
JPM3-ITF-AF20(2)D	247748	66	65	80
JPM3-ITF-AF21(2)	247748	66	60	87
JPM3-ITF-AF22(3)	247748	60	58	80
JPM3-ITF-AF23(2)	247748	65	63	83
JPM3-ITF-AF24(2)	247748	45	68	77
JPM3-ITF-AF25(2)	247748	62	58	75
JPM3-ITF-AF24(2)D	247748	73	67	102
JPM3-ITF-AP16(1)	247836	83	70	88
JPM3-ITF-AP17(1)	247836	77	69	80
JPM3-ITF-AP18(1)	247836	79	68	87
JPM3-ITF-AP19(1)	247836	71	47	90
JPM3-ITF-AP21(1)	247836	65	57	69
JPM3-ITF-AF36(3)	247836	78	64	81
JPM3-ITF-AF37(3)	247836	75	67	84
JPM3-ITF-AF38(2)	247836	78	71	84
JPM3-ITF-AF39(2)	247836	66	25	79
JPM3-ITF-AF40(2)	247836	69	61	78
JPM3-ITF-AF41(2)	247836	81	74	91
JPM3-ITF-AF42(2)	247836	62	54	75
JPM3-ITF-AF43(2)	247836	66	54	79
JPM3-ITF-AF44(2)	247836	80	71	85
JPM3-ITF-AP12(1)	247811	67	55	74
JPM3-ITF-AP13(1)	247811	79	69	81
JPM3-ITF-AP14(1)	247811	68	33	81
JPM3-ITF-AP15(1)	247811	78	66	89
JPM3-ITF-AF28(2)	247811	58	14	86
JPM3-ITF-AF29(2)	247811	79	64	89
JPM3-ITF-AF30(2)	247811	72	64	86
JPM3-ITF-AF31(2)	247811	82	75	87
JPM3-ITF-AF32(2)	247811	76	68	82
JPM3-ITF-AF33(2)	247811	77	69	80
JPM3-ITF-AF34(2)	247811	74	67	79
JPM3-ITF-AF35(2)	247811	77	69	84
JPM3-ITF-AP13(1)D	247811	76	66	89
JPM3-ITF-AP23(1)	247884	69	62	71
JPM3-ITF-AP24(1)	247884	65	62	64
JPM3-ITF-AP25(2)	247884	67	62	72
JPM3-ITF-AP26(2)	247884	81	69	87
JPM3-ITF-AP27(2)	247884	70	63	71
JPM3-ITF-AP28(2)	247884	81	71	80
JPM3-ITF-AP29(2)	247884	72	65	75
JPM3-ITF-AF46(2)	247884	76	64	80
JPM3-ITF-AF47(2)	247884	77	72	83
JPM3-ITF-AF48(2)	247884	67	56	74
JPM3-ITF-AF49(2)	247884	79	71	89
JPM3-ITF-AF51(2)	247884	70	63	74
JPM3-ITF-AF52(2)	247884	70	64	78
JPM3-ITF-AF53(2)	247884	63	56	64

D - diluted out

SDG - sample delivery group

PAHs - polynuclear aromatic hydrocarbons

Table 3

Surrogate Recoveries for PAHs

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 9)

Sample Identification	SDG	2-Fluorobiphenyl	Nitrobenzene-d5	Terphenyl-d14
JPM3-ITF-AF54(2)	247884	71	65	77
JPM3-ITF-AF55(2)	247884	66	59	81
JPM3-ITF-AF67(2)	247954	63	56	63
JPM3-ITF-AF68(2)	247954	56	50	57
JPM3-ITF-AF69(2)	247954	62	54	65
JPM3-ITF-AF70(2)	247954	51	42	61
JPM3-ITF-AP32(1)	247954	63	57	62
JPM3-ITF-AP33(1)	247954	62	50	61
JPM3-ITF-AP34(1)	247954	70	59	66
JPM3-ITF-AP35(1)	247954	51	35	63
JPM3-ITF-AP34(1)-D	247954	57	50	70
JPM3-ITF-AF56(2)	247904	77	66	77
JPM3-ITF-AF57(2)	247904	62	53	72
JPM3-ITF-AF58(2)	247904	61	55	71
JPM3-ITF-AF59(2)	247904	70	61	74
JPM3-ITF-AF60(2)	247904	66	58	81
JPM3-ITF-AF62(2)	247904	65	54	72
JPM3-ITF-AF63(2)	247904	61	54	76
JPM3-ITF-AF64(2)	247904	73	54	76
JPM3-ITF-AF65(2)	247904	76	64	79
JPM3-ITF-AF64(2)	247904	78	64	81
JPM3-ITF-AP30(2)	247904	68	57	77
JPM3-ITF-AP31(2)	247904	63	56	82
JPM3-ITF-AF58(2)-D	247904	71	63	78
JPM3-ITF-AF60(2)-D	247904	72	62	82
JPM3-ITF-AP36(1)	248048	66	57	86
JPM3-ITF-AP37(1)	248048	61	53	89
JPM3-ITF-AP38(1)	248048	60	57	82
JPM3-ITF-AP71(2)	248048	57	48	83
JPM3-ITF-AF72(2)	248048	53	47	83
JPM3-ITF-AF73(2)	248048	59	54	86
JPM3-ITF-AF74(2)	248048	54	49	90
JPM3-ITF-AF75(2)	248048	47	40	75
JPM3-ITF-AF76(2)	248048	42	36	61
JPM3-ITF-AF77(2)	248048	55	47	85
JPM3-ITF-AF78(2)	248048	48	44	69
JPM3-ITF-AF79(2)	248048	48	41	79
JPM3-ITF-AF80(2)	248048	51	48	74
JPM3-ITF-AF72(2)-D	248048	41	42	72
JPM3-ITF-AP38(1)-D	248048	54	47	86
JPM3-ITF-AF81(2)	248065	57	51	85
JPM3-ITF-AF82(2)	248065	69	60	80
JPM3-ITF-AF83(2)	248065	66	56	87
JPM3-ITF-AF84(2)	248065	66	56	90
JPM3-ITF-AP44(1)	248065	94	69	94
JPM3-ITF-AF83(2)-D	248065	67	52	90
JPM3-ITF-AF95(2)	248160	75	73	90
JPM3-ITF-AF96(2)	248160	61	54	84
JPM3-ITF-AF97(2)	248160	65	52	90
JPM3-ITF-AF98(2)	248160	67	68	80

D - diluted out

SDG - sample delivery group

PAHs - polynuclear aromatic hydrocarbons

Table 3

Surrogate Recoveries for PAHs

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 4 of 9)

Sample Identification	SDG	2-Fluorobiphenyl	Nitrobenzene-d5	Terphenyl-d14
JPM3-ITF-AF99(2)	248160	76	77	90
JPM3-ITF-AF101(2)	248160	62	57	78
JPM3-ITF-AF102(2)	248160	62	62	84
JPM3-ITF-AF99(2)-D	248160	60	62	77
JPM3-ITF-AF103(2)	248182	81	72	97
JPM3-ITF-AF104(2)	248182	74	76	106
JPM3-ITF-AF105(2)	248182	74	66	96
JPM3-ITF-AF106(2)	248182	68	65	94
JPM3-ITF-AF107(2)	248182	78	71	100
JPM3-ITF-AF105(2)-D	248182	70	66	102
JPM3-ITF-AF110(2)	248190	79	77	95
JPM3-ITF-AF111(2)	248190	75	72	86
JPM3-ITF-AF113(2)	248190	83	81	97
JPM3-ITF-AF114(2)	248190	83	77	96
JPM3-ITF-AF115(2)	248190	85	80	115
JPM3-ITF-AF113(2)-D	248190	76	76	103
JPM3-ITF-AP50(1)	248208	72	62	85
JPM3-ITF-AP51(1)	248208	73	72	84
JPM3-ITF-AP54(1)	248208	76	71	85
JPM3-ITF-AP55(1)	248208	113	70	97
JPM3-ITF-AP56(1)	248208	61	42	62
JPM3-ITF-AP55(1)-D	248208	71	40	84
JPM3-ITF-AF116(2)	248233	85	85	84
JPM3-ITF-AF117(2)	248233	74	75	86
JPM3-ITF-AF118(2)	248233	79	80	90
JPM3-ITF-AF119(2)	248233	83	81	112
JPM3-ITF-AF121(2)	248233	76	74	89
JPM3-ITF-AF122(2)	248233	76	73	88
JPM3-ITF-AF123(2)	248233	63	60	98
JPM3-ITF-AF124(2)	248233	79	78	91
JPM3-ITF-AP57(1)	248233	78	68	90
JPM3-ITF-AF119(2)-D	248233	78	78	109
JPM3-ITF-AP60(1)	248248	80	76	87
JPM3-ITF-AP61(1)	248248	71	66	91
JPM3-ITF-AP63(1)	248248	72	70	83
JPM3-ITF-AF125(2)	248271	51	47	71
JPM3-ITF-AF126(2)	248271	74	71	103
JPM3-ITF-AF127(2)	248271	77	75	91
JPM3-ITF-AF128(2)	248271	75	73	113
JPM3-ITF-AF129(2)	248271	83	83	104
JPM3-ITF-AF130(2)	248271	67	68	83
JPM3-ITF-AF131(2)	248271	78	78	99
JPM3-ITF-AF132(2)	248271	78	73	85
JPM3-ITF-AF133(2)	248271	86	80	98
JPM3-ITF-AF130(2)-D	248271	62	63	79
JPM3-ITF-AP64(1)	248289	74	70	99
JPM3-ITF-AP65(1)	248289	79	77	97
JPM3-ITF-AP66(1)	248289	72	70	96
JPM3-ITF-AF134(2)	248289	73	65	97
JPM3-ITF-AF135(2)	248289	82	75	116

D - diluted out

SDG - sample delivery group

PAHs - polynuclear aromatic hydrocarbons

Table 3

Surrogate Recoveries for PAHs

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 5 of 9)

Sample Identification	SDG	2-Fluorobiphenyl	Nitrobenzene-d5	Terphenyl-d14
JPM3-ITF-AF136(2)	248289	56	55	66
JPM3-ITF-AP67(1)	248301	84	74	100
JPM3-ITF-AP68(1)	248301	81	67	90
JPM3-ITF-AP69(1)	248301	75	62	92
JPM3-ITF-AP70(1)	248301	91	68	105
JPM3-ITF-AF137(2)	248301	63	55	84
JPM3-ITF-AF138(2)	248301	77	65	81
JPM3-ITF-AF139(2)	248301	77	67	84
JPM3-ITF-AF140(2)	248301	70	59	83
JPM3-ITF-AF141(2)	248301	73	66	81
JPM3-ITF-AF142(2)	248301	64	55	81
JPM3-ITF-AP70(1)-D	248301	64	52	75
JPM3-ITF-AF143(2)	248327	55	50	72
JPM3-ITF-AF144(2)	248327	63	59	87
JPM3-ITF-AF145(2)	248327	73	57	87
JPM3-ITF-AF146(2)	248327	83	64	104
JPM3-ITF-AF147(2)	248327	90	78	95
JPM3-ITF-AF148(2)	248327	73	60	91
JPM3-ITF-AP71(1)	248327	77	68	90
JPM3-ITF-AP72(1)	248327	89	65	123
JPM3-ITF-AF145(2)-D	248327	79	67	99
JPM3-ITF-AF156(2)	248423	64	56	75
JPM3-ITF-AF157(2)	248423	63	57	77
JPM3-ITF-AF158(2)	248423	69	62	76
JPM3-ITF-AF159(2)	248423	70	64	75
JPM3-ITF-AF160(2)	248423	76	72	79
JPM3-ITF-AF161(2)	248423	82	75	97
JPM3-ITF-AF162(2)	248423	82	79	95
JPM3-ITF-AF163(2)	248423	65	59	75
JPM3-ITF-AF164(2)	248423	67	61	75
JPM3-ITF-AF165(2)	248423	76	70	83
JPM3-ITF-AF166(2)	248423	62	58	67
JPM3-ITF-AF161(2)-D	248423	79	71	84
JPM3-ITF-AF167(2)	248439	70	62	79
JPM3-ITF-AP77(1)	248537	72	67	78
JPM3-ITF-AP78(1)	248537	54	48	61
JPM3-ITF-AF168(2)	248537	89	79	116
JPM3-ITF-AF171	248926	61	40	68
JPM3-ITF-AF173	248926	58	62	81
JPM3-ITF-AF175	248926	48	43	67
JPM3-ITF-AP80	248926	55	51	76
JPM3-ITF-AF169	248926	32	66	70
JPM3-ITF-AF170	248926	57	54	74
JPM3-ITF-AF172	248926	50	45	81
JPM3-ITF-AF176	248926	44	43	60
JPM3-ITF-AF177	248926	60	58	84
JPM3-ITF-AF178	248926	45	42	78
JPM3-ITF-AF179	248926	50	99	82
JPM3-ITF-AF180(2)	248981	75	61	85
JPM3-ITF-AF181(2)	248981	78	63	84

D - diluted out

SDG - sample delivery group

PAHs - polynuclear aromatic hydrocarbons

Table 3

Surrogate Recoveries for PAHs

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 6 of 9)

Sample Identification	SDG	2-Fluorobiphenyl	Nitrobenzene-d5	Terphenyl-d14
JPM3-ITF-AF182(2)	248981	77	62	82
JPM3-ITF-AF183(2)	248981	83	66	95
JPM3-ITF-AF184(2)	248981	66	56	80
JPM3-ITF-AF185(2)	248981	55	46	74
JPM3-ITF-AF186(2)	248981	64	53	81
JPM3-ITF-AF187(2)	248981	66	54	79
JPM3-ITF-AF188(2)	248981	68	58	77
JPM3-ITF-AF189(2)	248981	62	49	73
JPM3-ITF-AF190(2)	248981	62	49	71
JPM3-ITF-AF191(2)	248981	57	46	69
JPM3-ITF-AP81(1)	248981	69	51	84
JPM3-ITF-AP82(1)	248981	70	52	77
JPM3-ITF-AP83(1)	248981	67	50	82
JPM3-ITF-AF186(2)-D	248981	66	50	84
JPM3-ITF-AF192(2)	249025	60	48	71
JPM3-ITF-AF193(2)	249025	63	53	76
JPM3-ITF-AF194(2)	249025	62	53	79
JPM3-ITF-AF195(2)	249025	64	52	70
JPM3-ITF-AF196(2)	249025	59	47	76
JPM3-ITF-AF197(2)	249025	68	55	72
JPM3-ITF-AF198(2)	249025	60	50	76
JPM3-ITF-AF199(2)	249025	62	51	76
JPM3-ITF-AF200(2)	249025	64	49	77
JPM3-ITF-AF201(2)	249025	61	49	68
JPM3-ITF-AF202(2)	249025	37	29	46
JPM3-ITF-AP85(2)	249025	66	50	74
JPM3-ITF-AF195(2)-D	249025	59	44	66
JPM3-ITF-AF204(2)	249072	71	59	68
JPM3-ITF-AF205(2)	249072	71	58	67
JPM3-ITF-AF206(2)	249072	63	54	64
JPM3-ITF-AF207(2)	249072	66	55	69
JPM3-ITF-AF208(2)	249072	64	55	63
JPM3-ITF-AF209(2)	249072	64	54	67
JPM3-ITF-AF211(2)	249072	70	58	71
JPM3-ITF-AP86(1)	249072	67	56	65
JPM3-ITF-AP87(1)	249072	56	45	62
JPM3-ITF-AP88(1)	249072	60	50	62
JPM3-ITF-AP89(1)	249072	59	49	63
JPM3-ITF-AF204(2)-D	249072	67	57	68
JPM3-ITF-AF213(2)	249177	61	56	70
JPM3-ITF-AF214(2)	249177	65	62	77
JPM3-ITF-AF215(2)	249177	59	60	77
JPM3-ITF-AF216(2)	249177	64	64	83
JPM3-ITF-AF217(2)	249177	57	56	80
JPM3-ITF-AF218(2)	249177	47	39	66
JPM3-ITF-AF219(2)	249177	56	54	75
JPM3-ITF-AF220(2)	249177	69	69	81
JPM3-ITF-AF221(2)	249177	67	65	82
JPM3-ITF-AP90(1)	249177	72	68	86
JPM3-ITF-AP91(1)	249177	61	54	83

D - diluted out

SDG - sample delivery group

PAHs - polynuclear aromatic hydrocarbons

Table 3

Surrogate Recoveries for PAHs

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 7 of 9)

Sample Identification	SDG	2-Fluorobiphenyl	Nitrobenzene-d5	Terphenyl-d14
JPM3-ITF-AF221(2)-D	249177	68	63	81
JPM3ITFCP1-1(1)	249398	79	79	95
JPM3ITFCP1-2(1)	249398	68	65	95
JPM3ITFCP1-3(1)	249398	83	82	105
JPM3ITFCP1-4(1)	249398	68	67	86
JPM3ITFCP1-5(1)	249398	90	89	112
JPM3ITFCP1-6(1)	249398	85	83	93
JPM3ITFCP1-7(1)	249398	77	70	102
JPM3ITFCP1-8(1)	249398	91	88	99
JPM3ITFCP1-9(1)	249398	83	78	102
JPM3ITFCP1-10(1)	249398	90	86	104
JPM3ITFCP1-11(1)	249398	89	87	118
JPM3ITFCP1-12(1)	249398	84	78	109
JPM3ITFCP1-13(1)	249398	84	82	106
JPM3ITFCP1-14(1)	249398	82	79	107
JPM3ITFCP1-15(1)	249398	73	73	95
JPM3ITFCP1-16(1)	249398	80	76	111
JPM3ITFCP1-17(1)	249398	84	83	112
JPM3ITFCP1-18(1)	249398	70	62	126
JPM3ITFCP1-19(1)	249398	64	64	87
JPM3ITFCP1-20(1)	249398	76	74	93
JPM3ITFCP1-21(1)	249398	74	69	106
JPM3-ITF-AF235(2)	249439	65	68	86
JPM3-ITF-AF236(2)	249439	85	87	100
JPM3-ITF-AF237(2)	249439	75	78	94
JPM3-ITF-AF238(2)	249439	76	75	90
JPM3-ITF-AF239(2)	249439	79	81	100
JPM3-ITF-AF240(2)	249439	80	84	99
JPM3-ITF-AF241(2)	249439	81	86	105
JPM3-ITF-AF222(2)	249240	63	62	80
JPM3-ITF-AF223(2)	249240	61	58	72
JPM3-ITF-AF224(2)	249240	67	63	77
JPM3-ITF-AF225(2)	249240	60	58	71
JPM3-ITF-AF226(2)	249240	66	60	76
JPM3-ITF-AF227(2)	249240	52	49	57
JPM3-ITF-AF228(2)	249240	64	60	77
JPM3-ITF-AF229(2)	249240	65	62	76
JPM3-ITF-AF230(2)	249240	59	56	76
JPM3-ITF-AF231(2)	249240	64	59	76
JPM3-ITF-AF232(2)	249240	57	56	76
JPM3-ITF-AF233(2)	249240	52	51	69
JPM3-ITF-AF234(2)	249240	48	47	61
JPM3-ITF-AF242(2)	249487	106	104	126
JPM3-ITF-AF243(2)	249487	84	83	107
JPM3-ITF-AF244(2)	249487	72	64	99
JPM3-ITF-AF245(2)	249487	76	73	105
JPM3-ITF-AF246(2)	249487	70	67	102
JPM3-ITF-AF247(2)	249487	70	66	99
JPM3-ITF-AF92(2)	249487	61	61	97
JPM3-ITF-AF93(2)	249487	69	69	97

D - diluted out

SDG - sample delivery group

PAHs - polynuclear aromatic hydrocarbons

Table 3

Surrogate Recoveries for PAHs

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 8 of 9)

Sample Identification	SDG	2-Fluorobiphenyl	Nitrobenzene-d5	Terphenyl-d14
JPM3-ITF-AF244(2)	249487	66	65	86
JPM12-AF4(2)	249563	73	62	101
JPM3-ITF-AP98(1)	249944	60	49	79
JPM3-ITF-AP99(1)	249944	66	49	93
JPM3-ITF-AF249(3)	249944	60	47	90
JPM3-ITF-AF250(3)	249944	52	41	70
JPM3-ITF-AF251(3)	249944	57	45	76
JPM3-ITF-AF252(3)	249944	97	82	114
JPM3-ITF-AF253(3)	249944	70	59	88
JPM3-ITF-AF254(3)	249944	62	48	79
JPM3-ITF-AP255(2)	250165	77	69	89
JPM3-ITF-AP256(2)	250165	66	52	85
JPM3-ITF-AP257(2)	250165	76	64	91
JPM3-ITF-AP258(2)	250165	57	50	76
JPM3-ITF-AF259(2)	250183	77	70	87
JPM3-ITF-AF260(2)	250183	68	58	79
JPM3-ITF-AP100(1)	250183	77	60	73
JPM3-ITF-A101(1)	250183	73	57	88
JPM3-ITF-A102(1)	250183	63	51	77
JPM3-ITF-AP103(1)	250195	70	60	83
JPL2-PF1(2)	500-4270	59	56	85
JPL2-PF2(2)	500-4270	79	61	78
JPL2-PF3(2)	500-4270	82	59	73
JPL2-AST-TF1(3)	500-4317	73	58	82
JPL2-AST-TF2(4)	500-4317	86	79	84
JPL2-AST-TP1(0.5)	500-4317	76	53	87
JPL2-AST-TP2(0.5)	500-4317	98	69	99
JPL2-AST-TP3(0.5)	500-4317	90	65	89
JPL2-PF5(4)	500-4427	88	66	89
JPL2-PF6(4)	500-4427	77	54	92
JPL2-TP4(1)	500-4472	83	62	98
JPL2-TP5(1)	500-4472	99	87	104
JPL2-TP6(1)	500-4472	78	71	86
JPL2-TF3(5)	500-4472	74	66	91
JPL2-TF4(7)	500-4472	80	87	89
JPL5-PCN-1(3)	500-5265	74	84	85
JPL5-PCN-2(3)	500-5265	81	91	90
JPL5-PCN-3(3)	500-5265	73	82	82
JPL5-PCN-4(3)	500-5265	83	93	95
JPL5-PCN-5(3)	500-5265	53	58	57
JPL5-PCN-6(3)	500-5265	79	84	87
JPL5-PCN-7(3)	500-5265	69	76	74
JPL5-PCN-8(3)	500-5265	83	91	93
JPL5-PCN-9(3)	500-5265	66	72	87
JPL5-PCN-10(3)	500-5265	79	82	93
JPL5-PCN-11(3)	500-5285	85	87	98
JPL5-PCN-12(3)	500-5285	77	78	85
JPL5-PCN-13(3)	500-5285	86	91	102
JPL5-PCN-14(3)	500-5285	77	84	96
JPL5-PCN-15(3)	500-5285	80	85	94

D - diluted out

SDG - sample delivery group

PAHs - polynuclear aromatic hydrocarbons

Table 3

Surrogate Recoveries for PAHs

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 9 of 9)

Sample Identification	SDG	2-Fluorobiphenyl	Nitrobenzene-d5	Terphenyl-d14
JPL5-PCN-16(3)	500-5285	70	75	90
JPL5-PCN-17(3)	500-5285	81	87	105
JPL5-PCN-18(3)	500-5285	78	85	93
JPL5-PCN-19(3)	500-5285	63	67	75
JPL5-PCN-20(3)	500-5285	54	54	75
JPL5-PCN-21(3)	500-5285	63	65	86
JPL5-PCN-22(3)	500-5285	79	85	91
JPL5-PCN-23(3)	500-5285	67	71	89
JPL5-PCN-24(3)	500-5285	54	54	66
JPL5-PCN-25(3)	500-5285	57	59	71
JPL5-PCN2-1(5)	500-5933	83	58	96
JPL5-PCN2-2(5)	500-5933	77	57	84
JPL5-PCN2-3(5)	500-5933	93	66	108
JPL5-PCN2-4(5)	500-5933	93	65	108
JPL5-PCN2-5(5)	500-5933	120	96	138
JPL5-PCN2-6(5)	500-5933	80	63	153
JPL5-PCN2-7(5)	500-5933	78	59	135
JPL5-PCN2-8(5)	500-5933	93	72	185
JPL5-PCN2-9(5)	500-5933	97	74	167
JPL5-PCN2-10(5)	500-5933	96	76	163
JPL5-PCN2-11(5)	500-5954	85	67	74
JPL5-PCN2-12(5)	500-5954	99	78	85
JPL5-PCN2-13(5)	500-5954	57	50	51
JPL5-PCN2-14(5)	500-5954	77	68	67
JPL5-PCN2-15(5)	500-5954	78	67	78
JPL5-PCN2-16(5)	500-5954	84	67	81
JPL5-PCN2-17(5)	500-5954	59	51	57
JPL5-PCN2-18(5)	500-5954	63	55	68
JPL5-PCN2-19(5)	500-5954	101	76	95
JPL5-PCN2-20(5)	500-5954	83	69	90
JPL5-PCN2-21(5)	500-5954	93	91	97
JPL5-PCN2-22(5)	500-5954	84	68	93
JPL5-PCN2-23(5)	500-5954	59	52	70
JPL5-PCN2-24(5)	500-5954	89	69	99
JPL5-PCN2-25(5)	500-5954	83	62	82
JPL5-PCN2-26(5)	500-5954	89	70	99
JPL5-PCN2-27(5)	500-5954	65	46	65

D - diluted out

SDG - sample delivery group

PAHs - polynuclear aromatic hydrocarbons

Table 4

Surrogate Recoveries for PCBs

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 2)

Sample Identification	SDG	Decachlorobiphenyl	Tetrachloro-m-xylene
JPL5-I1(1)	250005	103	104
JPL5-I2(1)	250005	101	107
JPL5-I3(1)	250005	103	102
JPL5-I4(1)	250005	122	143
JPL5-I5(1)	250005	110	122
JPL5-J1(1)	250005	109	100
JPL5-J2(1)	250005	138	160
JPL5-J3(1)	250005	96	98
JPL5-J4(1)	250005	111	120
JPL5-J5(1)	250005	89	107
JPL5-K1(1)	250012	107	99
JPL5-K2(1)	250012	101	100
JPL5-K3(1)	250012	105	104
JPL5-K4(1)	250012	102	103
JPL5-K5(1)	250012	102	102
JPL5-L1(1)	250012	112	103
JPL5-L2(1)	250012	D	D
JPL5-L3(1)	250012	D	D
JPL5-L4(1)	250012	D	D
JPL5-L5(1)	250012	D	D
JPM12-AF4(2)	249563	108	87
JPL5-A1(1)	249966	D	D
JPL5-A2(1)	249966	D	D
JPL5-A3(1)	249966	D	D
JPL5-A4(1)	249966	D	D
JPL5-A5(1)	249966	D	D
JPL5-B1(1)	249966	D	D
JPL5-B2(1)	249966	D	D
JPL5-B3(1)	249966	D	D
JPL5-B4(1)	249966	D	D
JPL5-B5(1)	249966	D	D
JPL5-C1(1)	249972	D	D
JPL5-C2(1)	249972	D	D
JPL5-C3(1)	249972	D	D
JPL5-C4(1)	249972	D	D
JPL5-C5(1)	249972	D	D
JPL5-D1(1)	249972	102	106
JPL5-D2(1)	249972	97	101
JPL5-D3(1)	249972	93	80
JPL5-D4(1)	249972	110	93
JPL5-D5(1)	249972	105	83
JPL5-E1(1)	249981	132	134
JPL5-E2(1)	249981	117	116
JPL5-E3(1)	249981	116	120
JPL5-E4(1)	249981	129	123
JPL5-E5(1)	249981	D	D
JPL5-F1(1)	249981	110	109
JPL5-F2(1)	249981	106	107
JPL5-F3(1)	249981	104	98
JPL5-F4(1)	249981	110	107
JPL5-F5(1)	249981	128	115
JPL5-G1(1)	249992	98	87
JPL5-G2(1)	249992	97	83
JPL5-G3(1)	249992	93	60
JPL5-G4(1)	249992	95	72
JPL5-G5(1)	249992	97	77
JPL5-H1(1)	249992	100	76
JPL5-H2(1)	249992	94	75
JPL5-H3(1)	249992	100	82
JPL5-H4(1)	249992	99	69
JPL5-H5(1)	249992	92	71
JPL5-AP1(0.5)	500-4792	88	95
JPL5-AP2(0.5)	500-4792	94	73
JPL5-AP3(0.5)	500-4792	100	89
JPL5-AP4(0.5)	500-4792	96	63

Table 4

Surrogate Recoveries for PCBs

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 2)

Sample Identification	SDG	Decachlorobiphenyl	Tetrachloro-m-xylene
JPL5-AF1(3)	500-4792	103	78
JPL5-AF2(3)	500-4792	89	61
JPL5-AF3(3)	500-4792	114	91
JPL5-AP4(3)	500-4792	102	87
JPL5-1(3)	500-4954	97	65
JPL5-2(3)	500-4954	93	64
JPL5-3(3)	500-4954	94	57
JPL5-4(3)	500-4954	94	58
JPL5-5(3)	500-4954	100	67
JPL5-6(3)	500-4954	97	58
JPL5-7(3)	500-4954	100	63
JPL5-8(3)	500-4954	96	68
JPL5-9(3)	500-4954	97	73
JPL5-10(3)	500-4954	99	74
JPL5-11(3)	500-4954	80	70
JPL5-12(3)	500-4954	95	79
JPL5-13(D)	500-4954	D	D
JPL5-10-D(3)	500-4954	100	77
JPL5-PCN-1(3)	500-5265	D	D
JPL5-PCN-2(3)	500-5265	D	D
JPL5-PCN-3(3)	500-5265	D	D
JPL5-PCN-4(3)	500-5265	D	D
JPL5-PCN-5(3)	500-5265	D	D
JPL5-PCN-6(3)	500-5265	110	86
JPL5-PCN-7(3)	500-5265	109	88
JPL5-PCN-8(3)	500-5265	D	D
JPL5-PCN-9(3)	500-5265	D	D
JPL5-PCN-10(3)	500-5265	D	D
JPL5-14(3)	500-5306	95	81
JPL5-15(0)	500-5306	114	100
JPL5-PCN2-1(5)	500-5933	68	55
JPL5-PCN2-2(5)	500-5933	81	58
JPL5-PCN2-3(5)	500-5933	77	68
JPL5-PCN2-4(5)	500-5933	77	62
JPL5-PCN2-5(5)	500-5933	79	68
JPL5-PCN2-6(5)	500-5933	80	65
JPL5-PCN2-7(5)	500-5933	75	63
JPL5-PCN2-8(5)	500-5933	80	58
JPL5-PCN2-9(5)	500-5933	80	56
JPL5-PCN2-10(5)	500-5933	79	55

Table 5

Surrogate Recoveries for TPH

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 2)

Sample Identification	SDG	a,a,a-Trifluorotoluene	4-Bromofluorobenzene	2-Fluorobiphenyl	o-Terphenyl
JPM3-ITF-AF86(2)	248084	89	81	72	100
JPM3-ITF-AF87(2)	248084	89	79	75	84
JPM3-ITF-AF130(2)	248307	91	83	81	86
JPM3-ITF-AF133(2)	248307	92	83	80	93
JPM3-ITF-AF130(2)-D	248307	91	82	79	86
JPM3-ITF-AF153(2)	248379	102	93	73	79
JPM3-ITF-AF154(2)	248379	93	85	68	80
JPM3-ITF-AF153(2)-D	248379	94	86	57	72
JP-M3-ITF-AF97B(1)	250224	83	65	64	71
JPM3-ITF-AF208B(1)	250224	84	73	71	74
JPM3-ITF-AF209B(1)	250224	82	67	82	92
JPL2-CPTANK(0.5)	250400	88	73	D	D
JPL2-AST-TF1(3)	550-4317	82	70	58	97
JPL2-AST-TF2(4)	550-4317	88	108	D	D
JPL2-AST-TP1(0.5)	550-4317	90	77	81	101
JPL2-AST-TP2(0.5)	550-4317	84	72	139	193
JPL2-AST-TP3(0.5)	550-4317	90	77	89	121
JPL2-PF5(4)	500-4427	96	90	D	D
JPL2-PF6(6)	500-4427	91	109	159	125
JPL2-TP4(1)	500-4472	79	66	114	134
JPL2-TP5(1)	500-4472	74	62	86	107
JPL2TP6(1)	500-4472	76	66	73	93
JPL2TF3(5)	500-4472	76	64	73	93
JPL2TF4(7)	500-4472	92	109	221	153
JPL5-AP34(0.5)	500-5501	78	61	94	107
JPL5-AP35(0.5)	500-5501	68	51	95	115
JPL5-AP36(0.5)	500-5501	63	39	95	110
JPL5-AF9(3)	500-5501	70	53	99	112
JPL5-AF10(3)	500-5501	72	58	100	113
JPL5-AF11(3)	500-5501	68	49	88	101
JPL5-AF12(3)	500-5501	66	49	97	111
JPL5-AF13(3)	500-5501	72	57	81	95
JPL5-AF14(3)	500-5501	64	48	96	112
JPL5-AF15(3)	500-5501	86	73	84	98
JPL5-AF16(3)	500-5501	80	71	93	110
JPL5-AF17(3)	500-5501	76	61	98	113
JPL5-AF18(3)	500-5501	89	80	89	107
JPL5-AF19(3)	500-5501	89	79	80	96
JPL5-AF20(3)	500-5501	83	73	79	97
JPL5-AF21(3)	500-5501	81	72	82	98
JPL5-AF20(3)-D	500-5501	79	70	90	109
JPL5-AF21(3)-D	500-5501	80	70	91	111
JPL5-SP1(1)	500-6112	75	62	79	108
JPL5-SP2(1)	500-6112	71	57	81	106
JPL5-SP3(1)	500-6112	69	55	85	111
JPL5-SP4(1)	500-6112	72	60	74	97
JPL5-AP5(1)	500-6112	71	56	65	96
JPL5-SP6(1)	500-6112	76	62	76	108
JPL5-AP42(0.5)	500-6332	75	59	75	97
JPL5-AP43(0.5)	500-6332	78	67	90	117
JPL5-AP44(0.5)	500-6332	74	61	83	109
JPL5-AP45(0.5)	500-6332	71	56	94	115
JPL5-AP46(0.5)	500-6332	73	50	80	101
JPL5-AF28(2)	500-6332	80	69	80	99
JPL5-AF29(2)	500-6332	69	55	80	108

D - diluted out

SDG - sample delivery group

PAHs - polynuclear aromatic hydrocarbons

Table 5

Surrogate Recoveries for TPH

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 2)

Sample Identification	SDG	a,a,a-Trifluorotoluene	4-Bromofluorobenzene	2-Fluorobiphenyl	o-Terphenyl
JPL5-AP10(0.5)	500-5499	78	63	81	104
JPL5-AP11(0.5)	500-5499	76	60	75	94
JPL5-AP12(0.5)	500-5499	85	69	90	107
JPL5-AP13(0.5)	500-5499	81	66	88	103
JPL5-AP14(0.5)	500-5499	64	43	95	112
JPL5-AP15(0.5)	500-5499	73	56	88	105
JPL5-AP16(0.5)	500-5499	69	49	90	106
JPL5-AP17(0.5)	500-5499	73	56	81	113
JPL5-AP18(0.5)	500-5499	68	49	90	108
JPL5-AP19(0.5)	500-5499	73	57	89	109
JPL5-AP20(0.5)	500-5499	71	51	89	112
JPL5-AP21(0.5)	500-5499	80	64	95	111
JPL5-AP22(0.5)	500-5499	69	53	95	111
JPL5-AP23(0.5)	500-5499	64	46	101	113
JPL5-AP24(0.5)	500-5499	68	47	91	111
JPL5-AP25(0.5)	500-5499	69	52	78	103
JPL5-AP26(0.5)	500-5499	68	47	101	129
JPL5-AP27(0.5)	500-5499	67	48	92	110
JPL5-AP28(0.5)	500-5499	63	44	79	109
JPL5-AP29(0.5)	500-5499	66	45	84	104
JPL5-AP30(0.5)	500-5499	68	49	73	98
JPL5-AP31(0.5)	500-5499	63	39	88	105
JPL5-AP32(0.5)	500-5499	59	34	90	104
JPL5-AP33(0.5)	500-5499	62	40	94	110

D - diluted out

SDG - sample delivery group

PAHs - polynuclear aromatic hydrocarbons

FIGURES

Figure 1
1,2-Dinitrobenzene Surrogate Recoveries - USEPA Method SW-846 8330

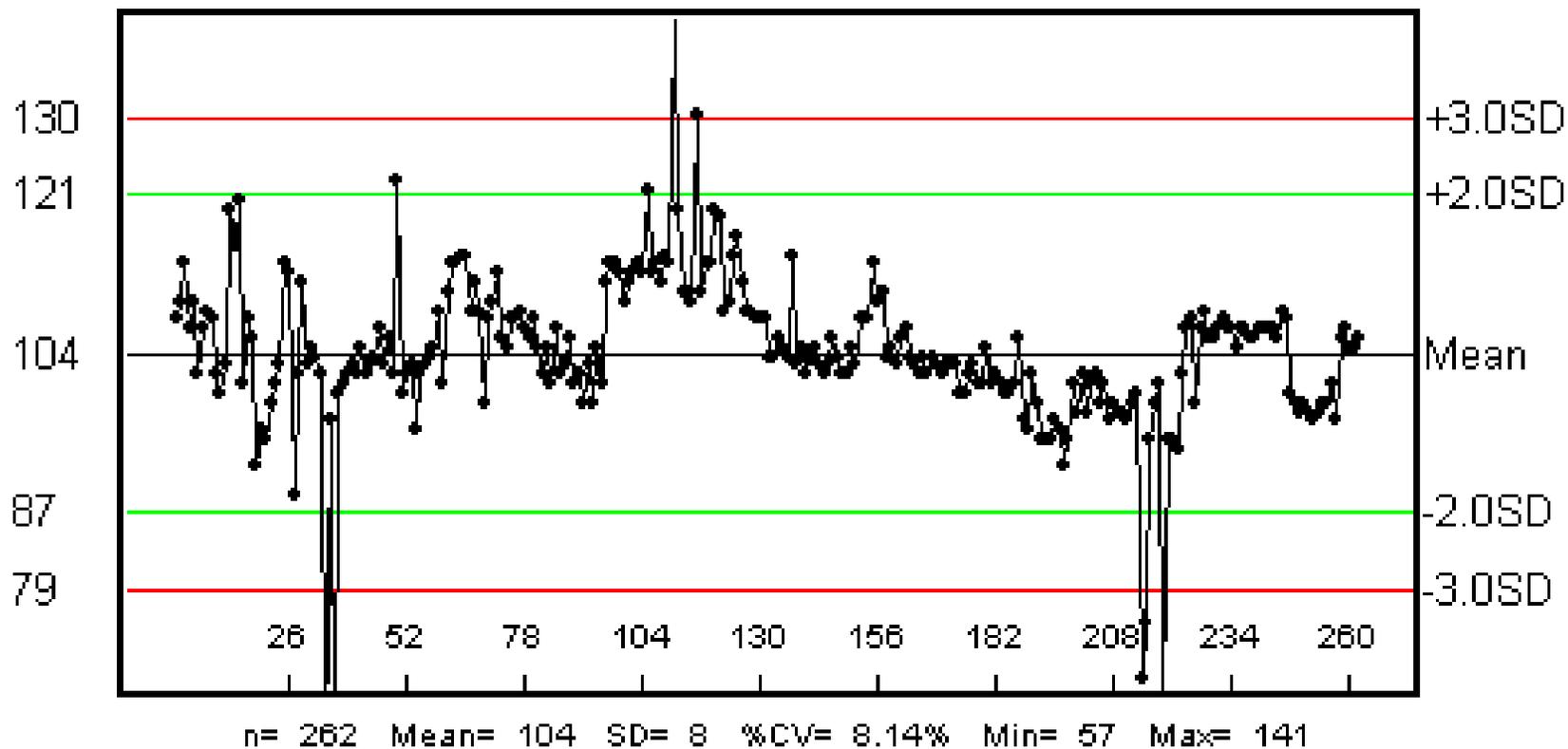


Figure 2
2-Fluorobiphenyl Surrogate Recoveries - USEPA Method SW-846 8270C

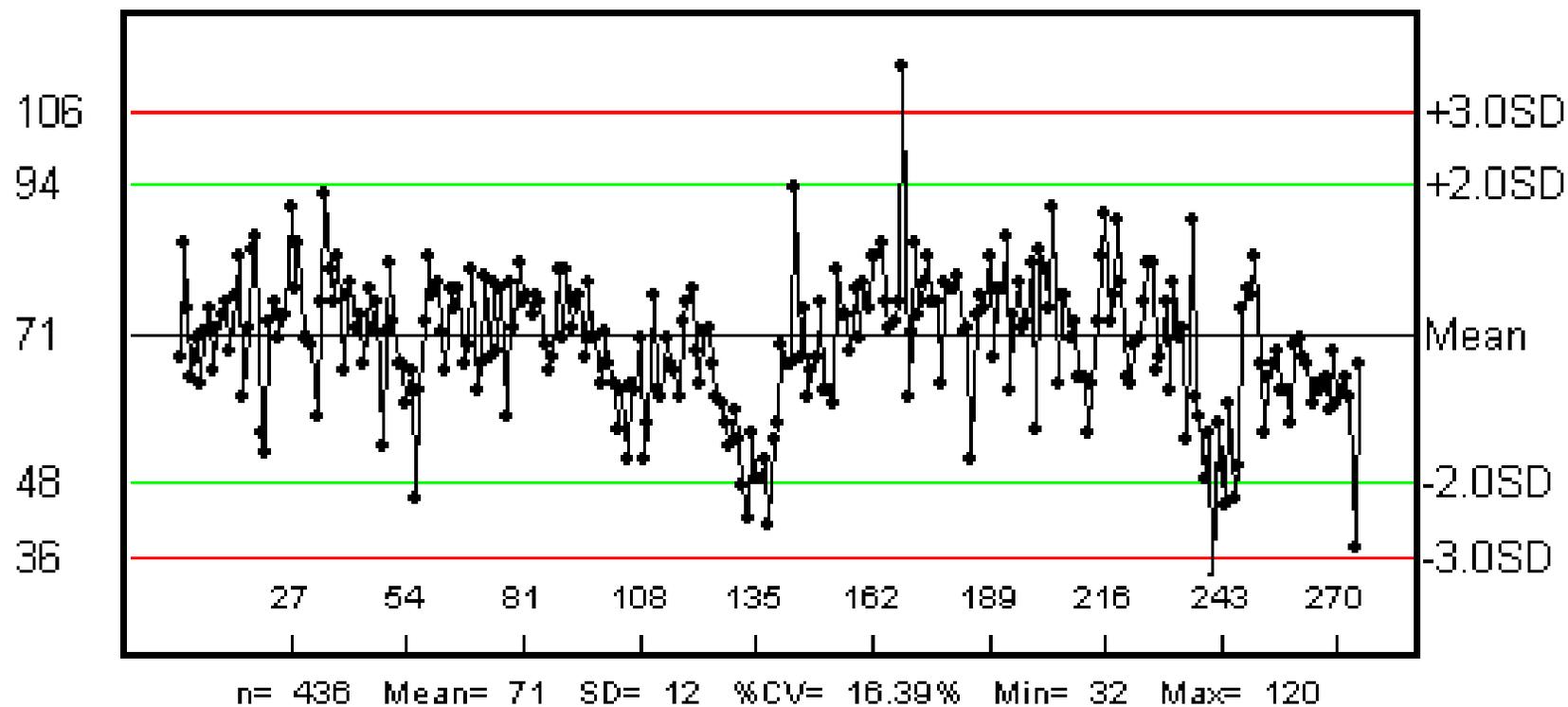


Figure 3
Nitrobenzene-d5 Surrogate Recoveries - USEPA Method SW-846 8270C

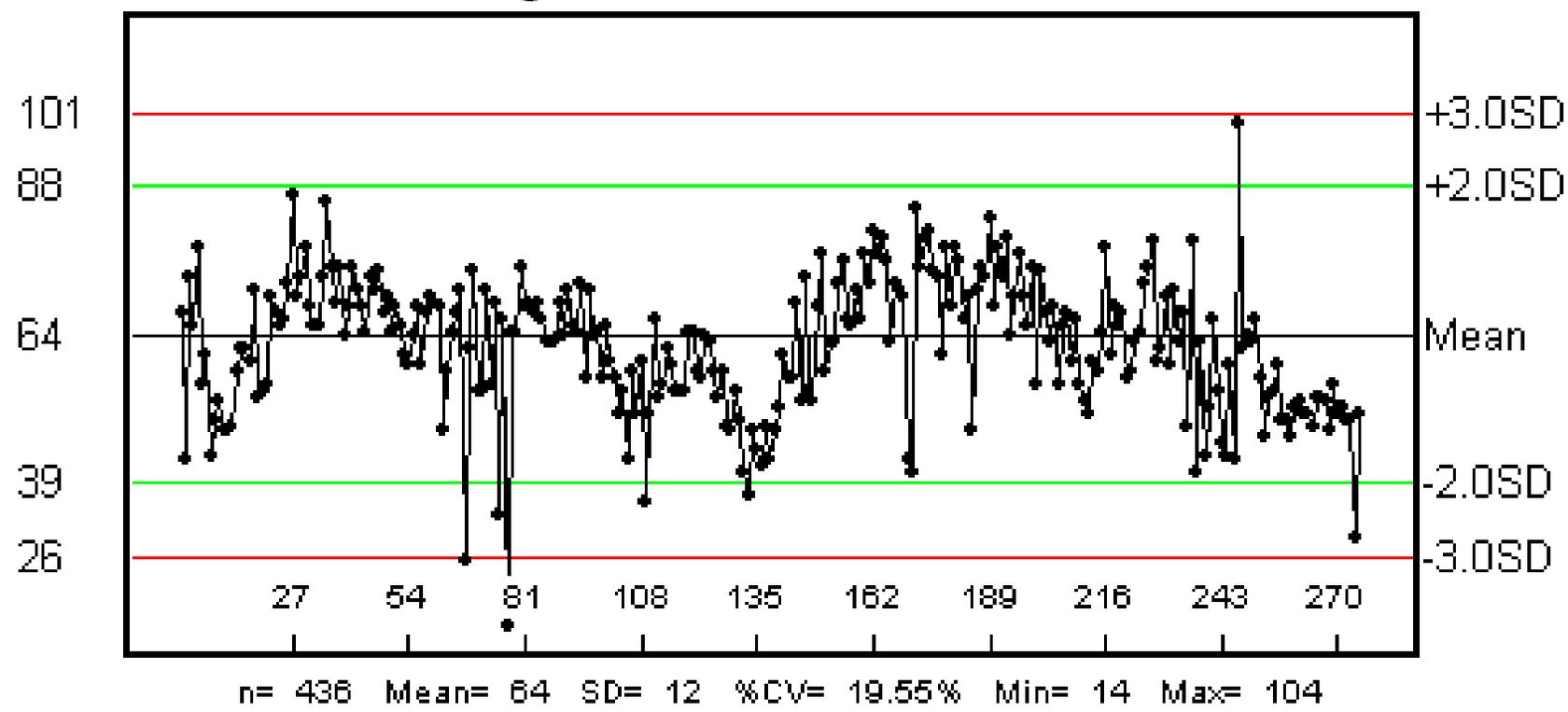


Figure 4
Terphenyl-d14 Surrogate Recoveries - USEPA Method SW-846 8270C

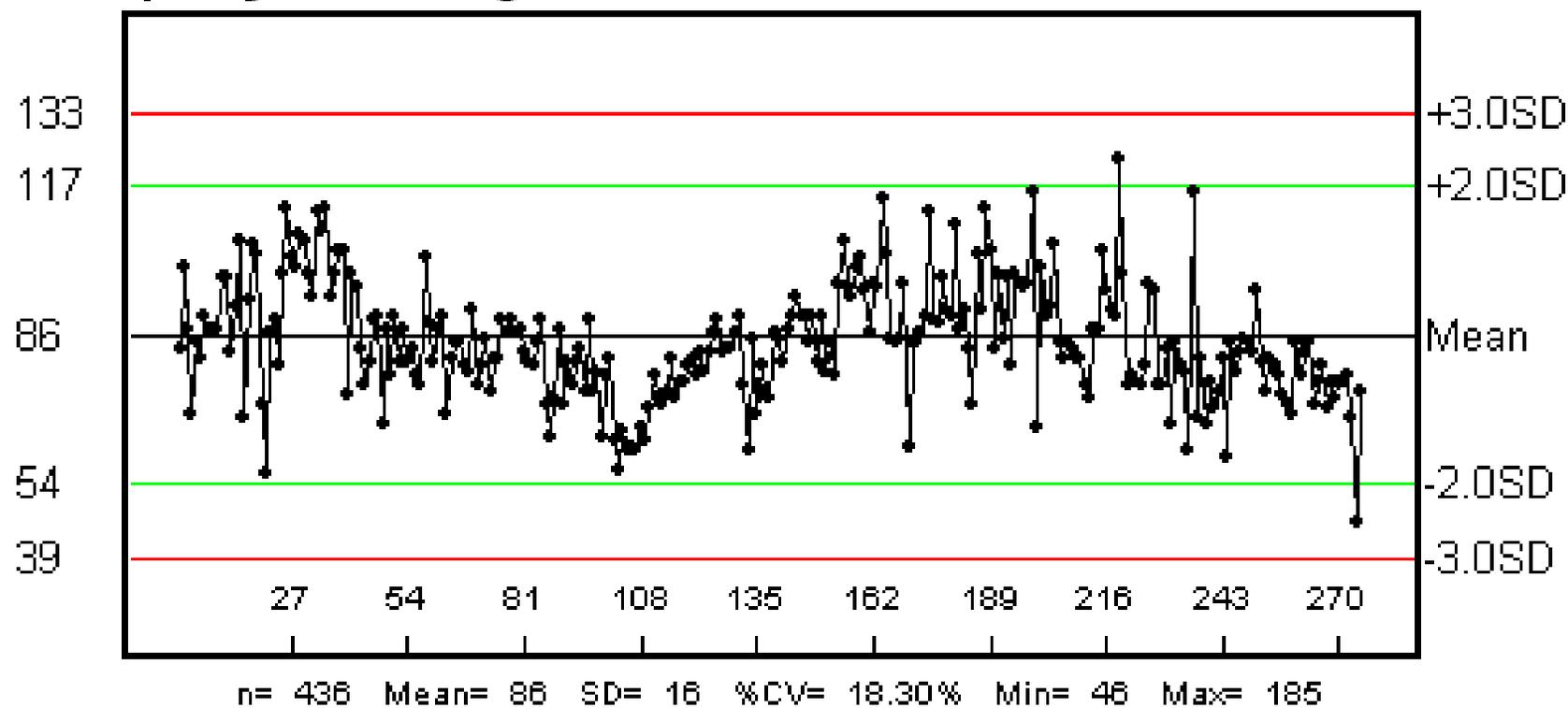


Figure 5
Decachlorobiphenyl Surrogate Recoveries - USEPA Method SW-846 8082

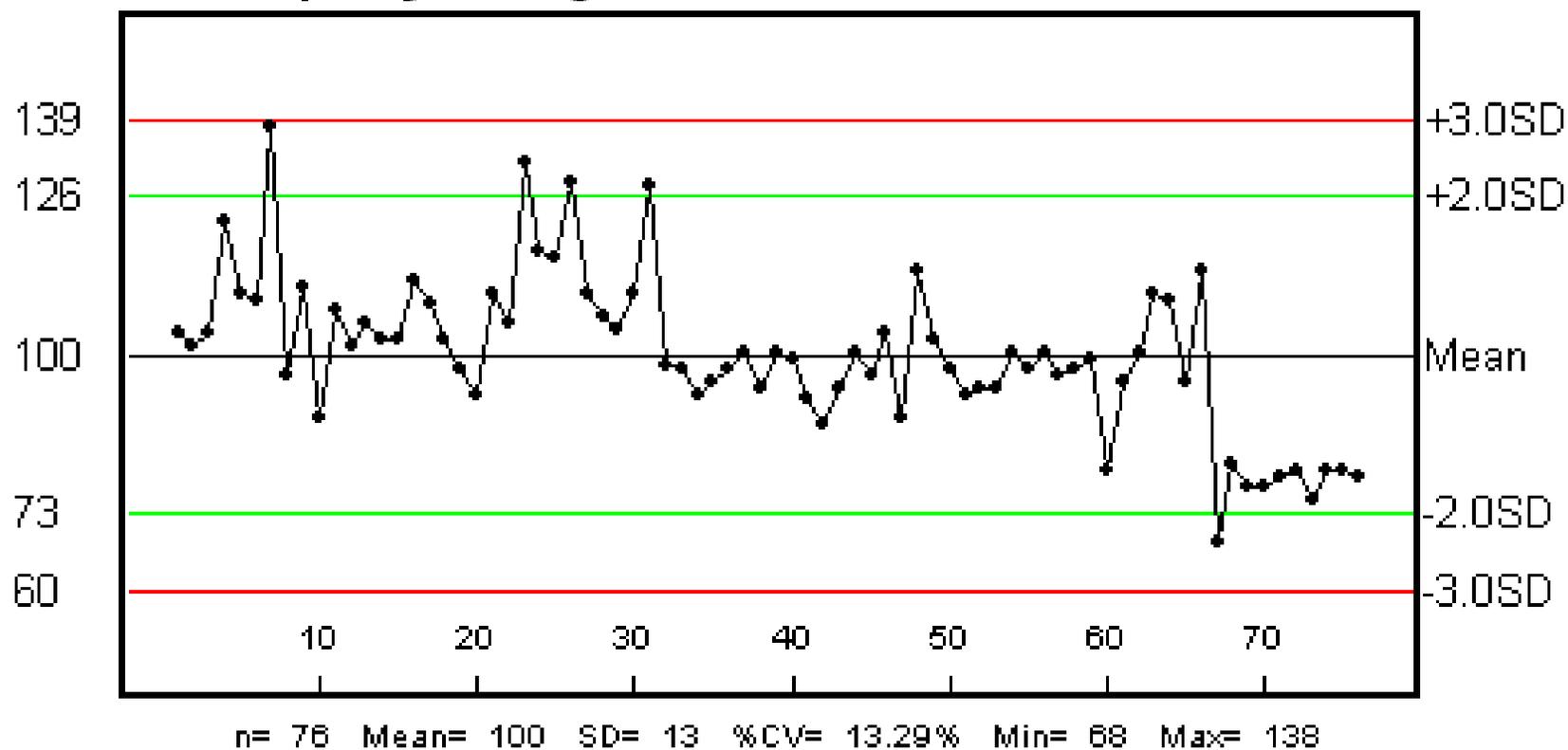
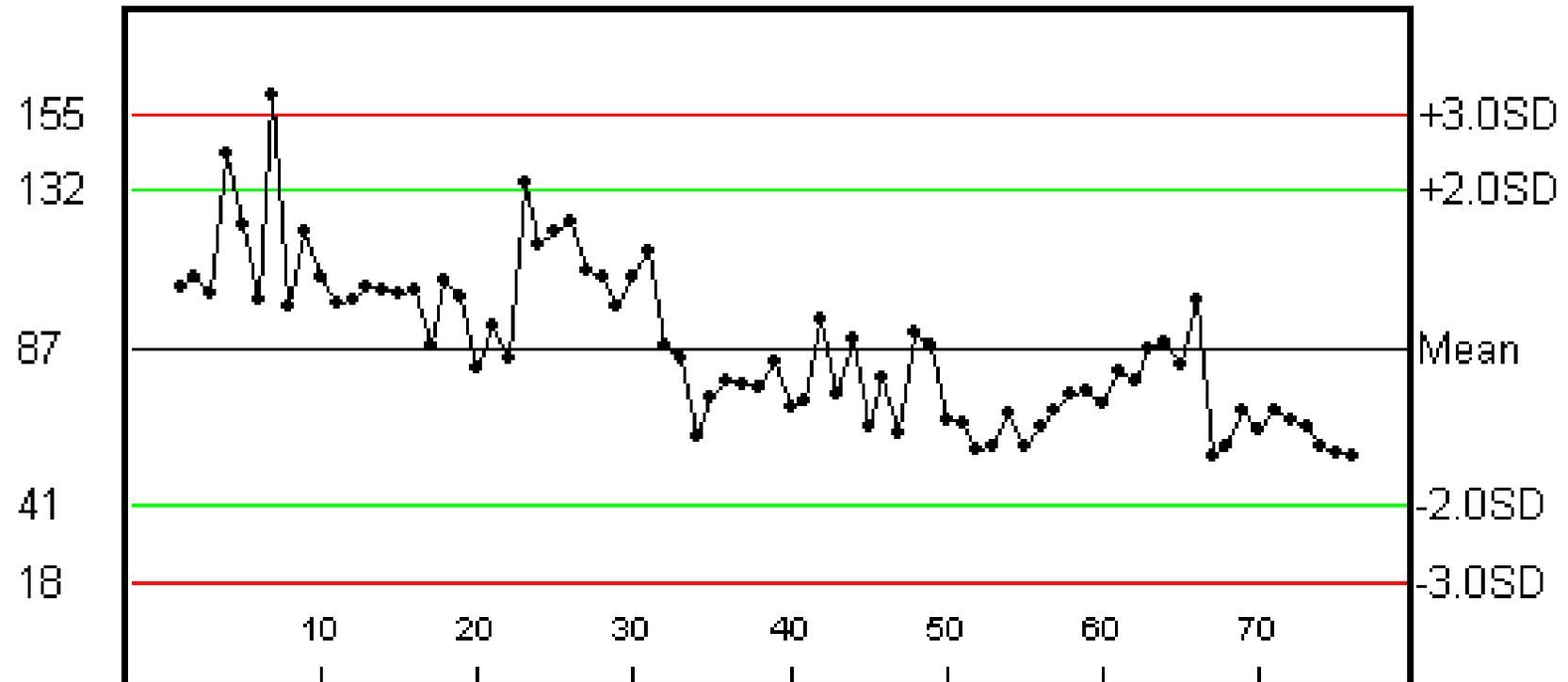


Figure 6

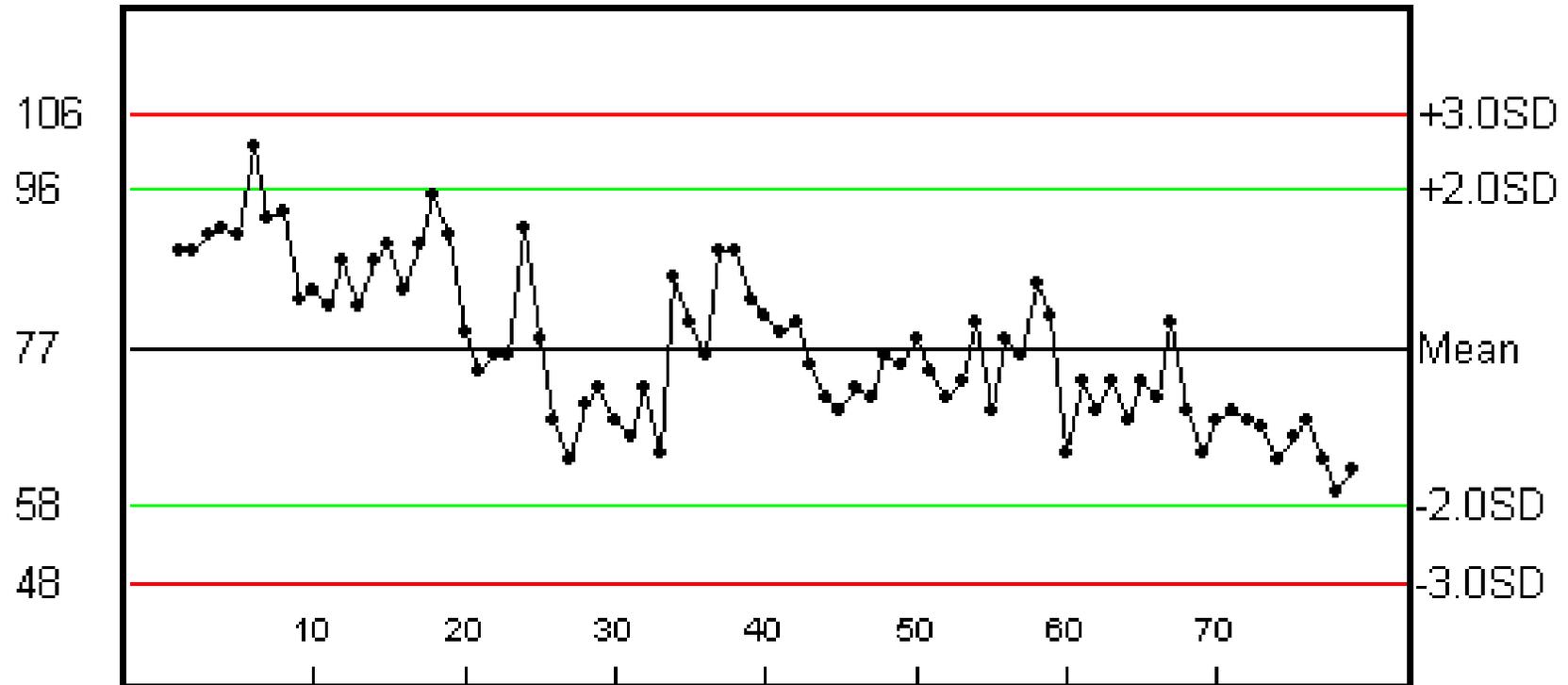
Tetrachloro-m-xylene Surrogate Recoveries - USEPA Method SW-846 8082



n= 76 Mean= 87 SD= 23 %CV= 26.21% Min= 55 Max= 160

Figure 7

a,a,a-Trifluorotoluene Surrogate Recoveries - USEPA Method SW-846 8015



n= 79 Mean= 77 SD= 10 %CV= 12.57% Min= 59 Max= 102

Figure 8

4-Bromofluorobenzene Surrogate Recoveries - USEPA Method SW-846 8015

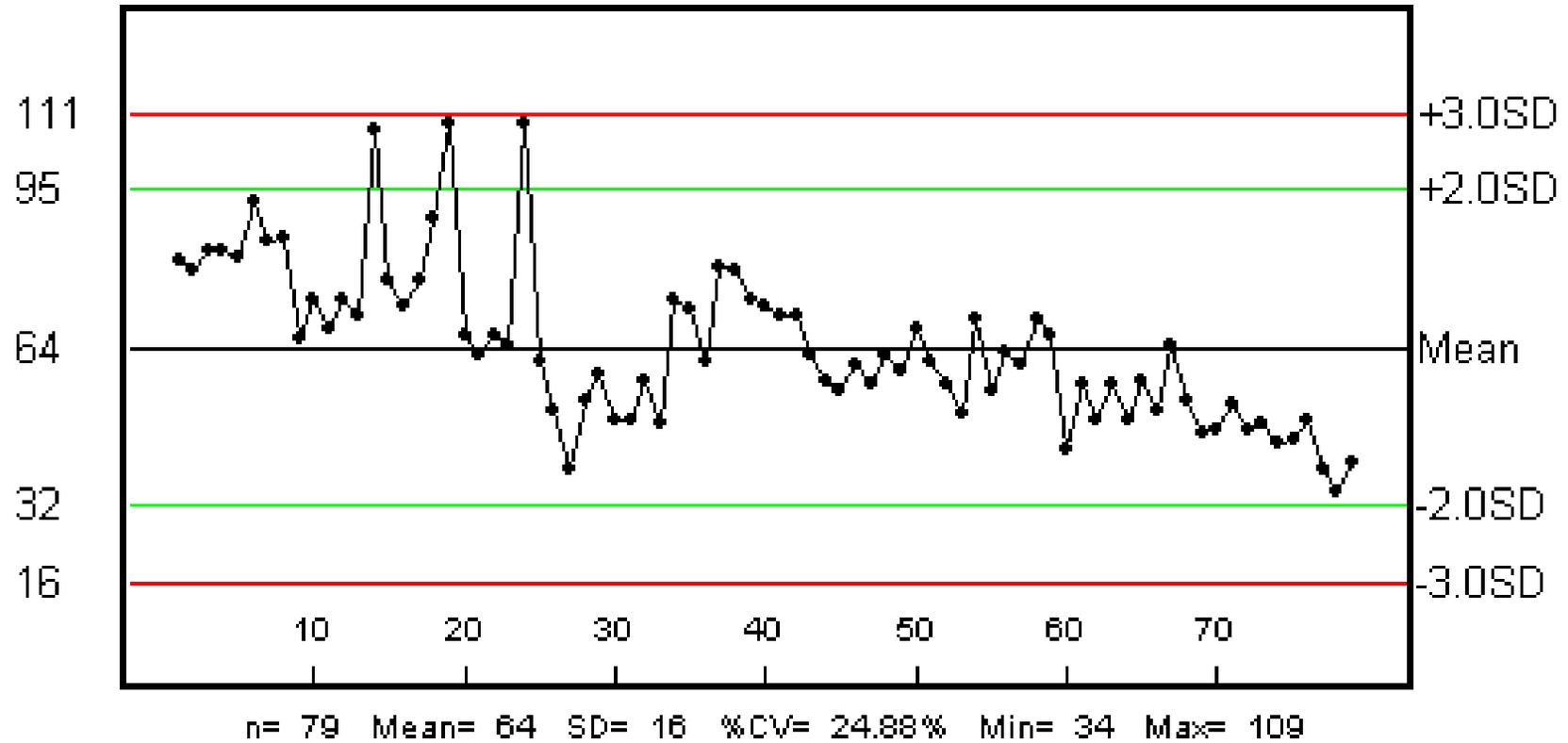


Figure 9
2-Fluorobiphenyl Surrogate Recoveries - USEPA Method SW-846 8015

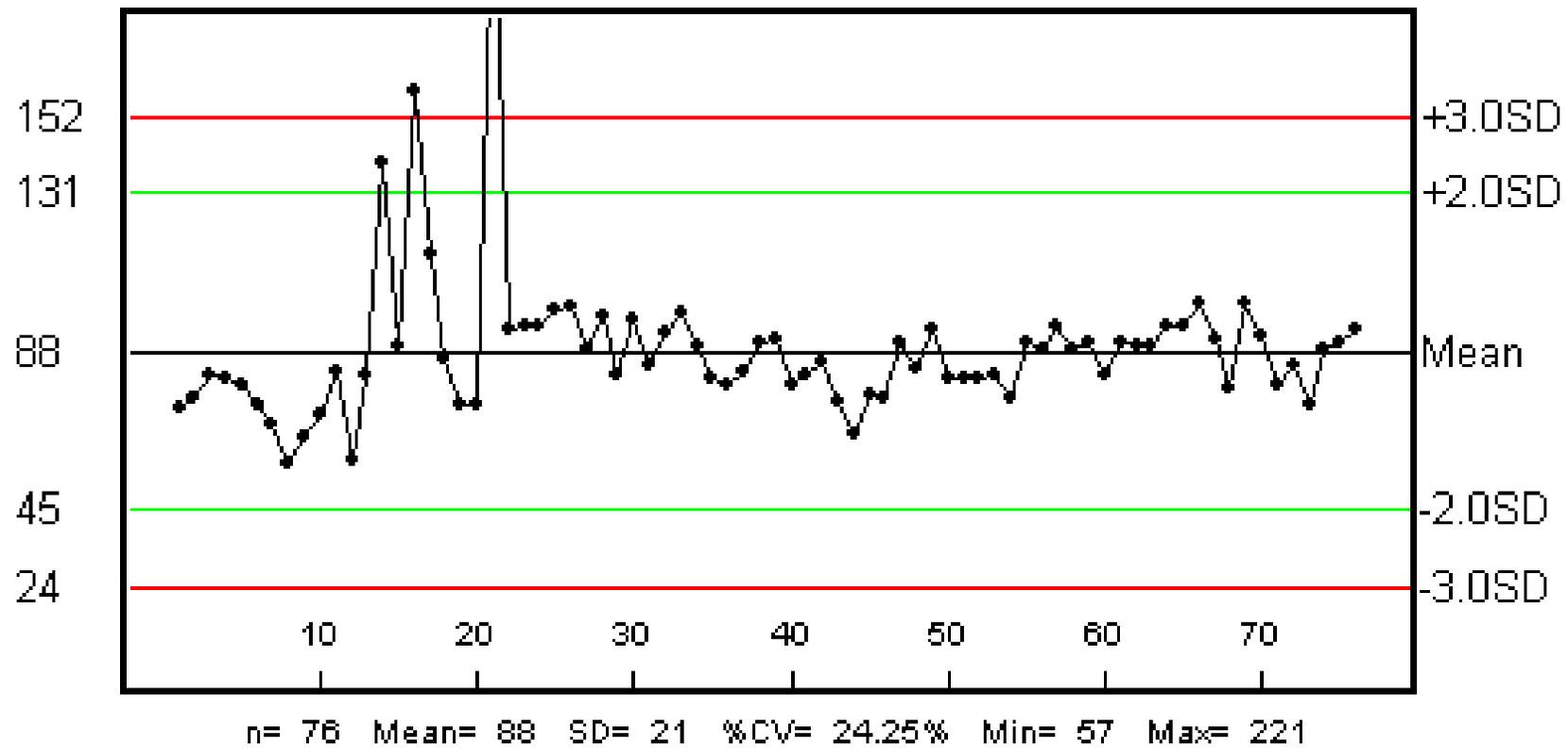
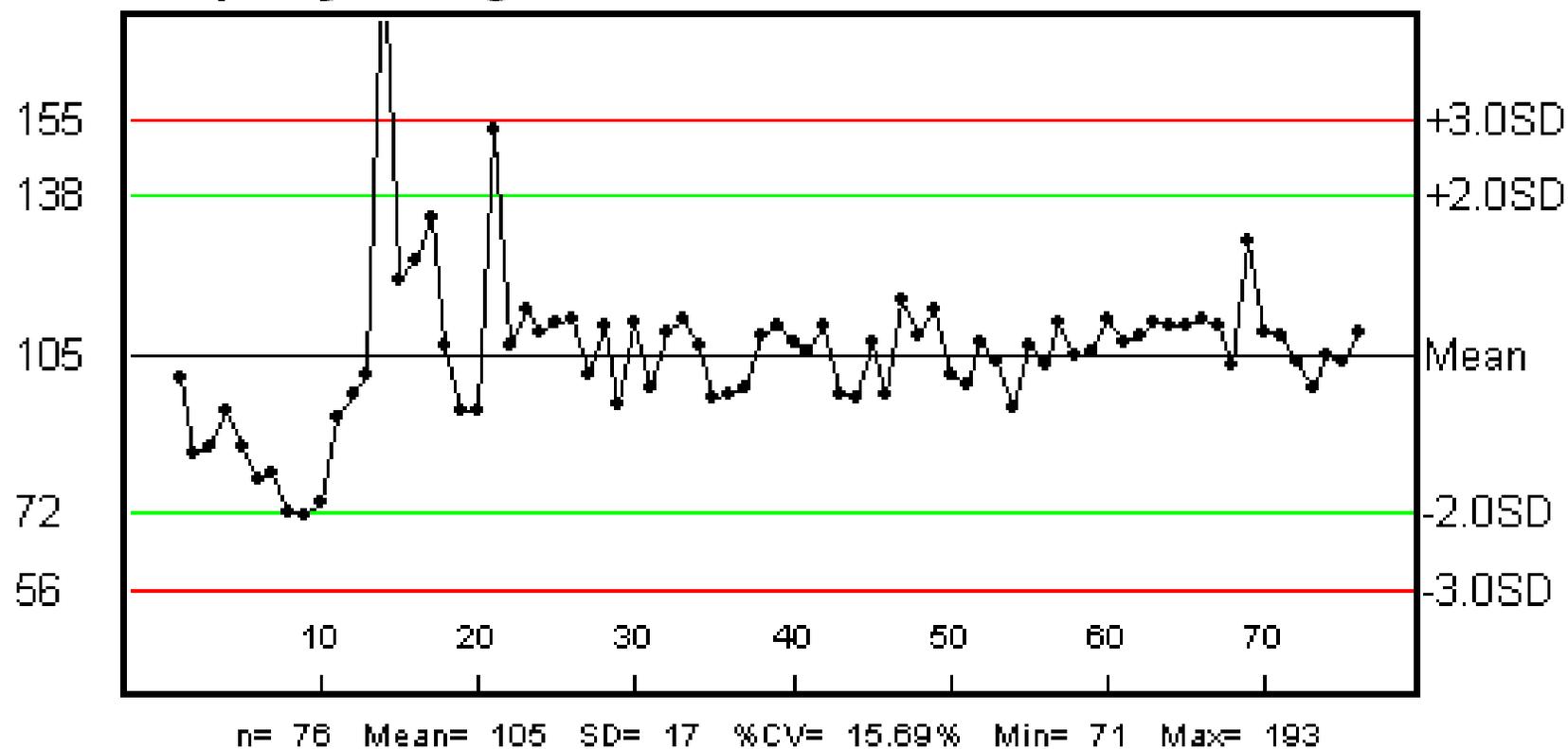


Figure 10
o-Terphenyl Surrogate Recoveries - USEPA Method SW-846 8015



APPENDIX A

CHAIN OF CUSTODY SUMMARY TABLE

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 40)

SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM3-ITF-AF1	247700	1	7/17/2006	1100	Soil	Grab		X																			
JPM3-ITF-AF2	247700	2	7/17/2006	1105	Soil	Grab		X																			
JPM3-ITF-AF3	247700	3	7/17/2006	1110	Soil	Grab		X																			
JPM3-ITF-AF4	247700	4	7/17/2006	1115	Soil	Grab		X																			
JPM3-ITF-AF5	247700	5	7/17/2006	1120	Soil	Grab		X																			
JPM3-ITF-AF6	247700	6	7/17/2006	1125	Soil	Grab		X																			
JPM3-ITF-AF7	247700	7	7/17/2006	1130	Soil	Grab		X																			
JPM3-ITF-AF8	247700	8	7/17/2006	1135	Soil	Grab		X																			
JPM3-ITF-AF9	247700	9	7/17/2006	1140	Soil	Grab		X																			
JPM3-ITF-AF10	247700	10	7/17/2006	1145	Soil	Grab		X																			
JPM3-ITF-AP1	247700	11	7/17/2006	1030	Soil	Grab		X																			
JPM3-ITF-AP2	247700	12	7/17/2006	1035	Soil	Grab		X																			
JPM3-ITF-AP3	247700	13	7/17/2006	1040	Soil	Grab		X																			
JPM3-ITF-AP4	247700	14	7/17/2006	1045	Soil	Grab		X																			
JPM3-ITF-AP5	247700	15	7/17/2006	1050	Soil	Grab		X																			
JPM3-OTF-AP19(1)	247739	1	7/18/2006	940	Soil	Grab									X	X											
JPM3-OTF-AP19(1)D	247739	2	7/18/2006	940	Soil	Grab									X	X											
JPM3-OTF-AP22(1)	247739	3	7/18/2006	955	Soil	Grab									X	X											
JPM3-OTF-AP22(1)D	247739	4	7/18/2006	955	Soil	Grab									X	X											
JPM3-ITF-AP2(1)	247739	5	7/18/2006	1035	Soil	Grab									X	X											
JPM3-ITF-AF4(2)	247739	6	7/18/2006	1115	Soil	Grab									X	X											
JPM3-ITF-AP8(1)	247748	1	7/19/2006	1325	Soil	Grab		X								X	X		X								
JPM3-ITF-AP9(1)	247748	2	7/19/2006	1330	Soil	Grab		X							X	X	X		X								
JPM3-ITF-AF11(1)	247748	3	7/19/2006	1340	Soil	Grab		X							X	X	X		X								
JPM3-ITF-AF11(3)	247748	4	7/19/2006	1345	Soil	Grab		X								X	X		X								
JPM3-ITF-AF12(2)	247748	5	7/19/2006	1350	Soil	Grab		X								X	X		X								
JPM3-ITF-AF13(2)	247748	6	7/19/2006	1355	Soil	Grab		X								X	X		X								
JPM3-ITF-AF14(2)	247748	7	7/19/2006	1400	Soil	Grab		X								X	X		X								
JPM3-ITF-AF15(2)	247748	8	7/19/2006	1405	Soil	Grab		X								X	X		X								
JPM3-ITF-AF16(2)	247748	9	7/19/2006	1410	Soil	Grab		X								X	X		X								
JPM3-ITF-AF17(2)	247748	10	7/19/2006	1415	Soil	Grab		X								X	X		X								
JPM3-ITF-AF19(2)	247748	11	7/19/2006	1420	Soil	Grab		X								X	X		X								
JPM3-ITF-AF20(2)	247748	12	7/19/2006	1430	Soil	Grab		X								X	X		X								
JPM3-ITF-AF20(2)D	247748	13	7/19/2006	1430	Soil	Grab		X								X	X		X								
JPM3-ITF-AF21(2)	247748	14	7/19/2006	1435	Soil	Grab		X								X	X		X								
JPM3-ITF-AF22(3)	247748	15	7/19/2006	1440	Soil	Grab		X								X	X		X								

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 40)

SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM3-ITF-AF23(2)	247748	16	7/19/2006	1445	Soil	Grab		X								X	X	X	X								
JPM3-ITF-AF24(2)	247748	17	7/19/2006	1450	Soil	Grab		X								X	X	X	X								
JPM3-ITF-AF25(2)	247748	18	7/19/2006	1455	Soil	Grab		X								X	X	X	X								
JPM3-ITF-AF24(2)D	247748	19	7/19/2006	1450	Soil	Grab		X								X	X	X	X								
JPM12-PROFILE LAGOON	247798	1	7/21/2006	1105	Water	Composite									X												
JPM3-ITF-AP12(1)	247811	1	7/24/2006	1130	Soil	Grab		X																			
JPM3-ITF-AP13(1)	247811	2	7/24/2006	1135	Soil	Grab		X																			
JPM3-ITF-AP14(1)	247811	3	7/24/2006	1140	Soil	Grab		X																			
JPM3-ITF-AP15(1)	247811	4	7/24/2006	1145	Soil	Grab		X																			
JPM3-ITF-AF28(2)	247811	5	7/24/2006	1150	Soil	Grab		X																			
JPM3-ITF-AF29(2)	247811	6	7/24/2006	1155	Soil	Grab		X																			
JPM3-ITF-AF30(2)	247811	7	7/24/2006	1200	Soil	Grab		X																			
JPM3-ITF-AF31(2)	247811	8	7/24/2006	1205	Soil	Grab		X																			
JPM3-ITF-AF32(2)	247811	9	7/24/2006	1210	Soil	Grab		X																			
JPM3-ITF-AF33(2)	247811	10	7/24/2006	1215	Soil	Grab		X																			
JPM3-ITF-AF34(2)	247811	11	7/24/2006	1220	Soil	Grab		X																			
JPM3-ITF-AF35(2)	247811	12	7/24/2006	1225	Soil	Grab		X																			
JPM3-ITF-AP13(1)D	247811	13	7/24/2006	1135	Soil	Grab		X																			
JPM3-ITF-AP16(1)	247836	1	7/25/2006	1205	Soil	Grab		X							X												
JPM3-ITF-AP17(1)	247836	2	7/25/2006	1210	Soil	Grab		X																			
JPM3-ITF-AP18(1)	247836	3	7/25/2006	1215	Soil	Grab		X																			
JPM3-ITF-AP19(1)	247836	4	7/25/2006	1220	Soil	Grab		X																			
JPM3-ITF-AP21(1)	247836	5	7/25/2006	1230	Soil	Grab		X																			
JPM3-ITF-AF36(3)	247836	6	7/25/2006	1240	Soil	Grab		X																			
JPM3-ITF-AF37(3)	247836	7	7/25/2006	1245	Soil	Grab		X																			
JPM3-ITF-AF38(2)	247836	8	7/25/2006	1250	Soil	Grab		X																			
JPM3-ITF-AF39(2)	247836	9	7/25/2006	1255	Soil	Grab		X																			
JPM3-ITF-AF40(2)	247836	10	7/25/2006	1300	Soil	Grab		X																			
JPM3-ITF-AF41(2)	247836	11	7/25/2006	1305	Soil	Grab		X																			
JPM3-ITF-AF42(2)	247836	12	7/25/2006	1310	Soil	Grab		X																			
JPM3-ITF-AF43(2)	247836	13	7/25/2006	1315	Soil	Grab		X																			
JPM3-ITF-AF44(2)	247836	14	7/25/2006	1320	Soil	Grab		X																			
JPM3-ITF-AP23(1)	247884	1	7/27/2006	1000	Soil	Grab		X																			
JPM3-ITF-AP24(1)	247884	2	7/27/2006	1005	Soil	Grab		X																			
JPM3-ITF-AP25(2)	247884	3	7/27/2006	1010	Soil	Grab		X																			
JPM3-ITF-AP26(2)	247884	4	7/27/2006	1015	Soil	Grab		X																			

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 40)

SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM3-ITF-AP27(2)	247884	5	7/27/2006	1020	Soil	Grab		X																			
JPM3-ITF-AP28(2)	247884	6	7/27/2006	1025	Soil	Grab		X																			
JPM3-ITF-AP29(2)	247884	7	7/27/2006	1030	Soil	Grab		X																			
JPM3-ITF-AF46(2)	247884	8	7/27/2006	1035	Soil	Grab	X	X							X	X			X				X	X	X		
JPM3-ITF-AF47(2)	247884	9	7/27/2006	1040	Soil	Grab	X	X							X	X			X				X	X	X		
JPM3-ITF-AF48(2)	247884	10	7/27/2006	1045	Soil	Grab	X	X							X	X			X				X	X	X		
JPM3-ITF-AF49(2)	247884	11	7/27/2006	1050	Soil	Grab	X	X							X	X			X				X	X	X		
JPM3-ITF-AF51(2)	247884	12	7/27/2006	1100	Soil	Grab	X	X							X	X			X				X	X	X		
JPM3-ITF-AF52(2)	247884	13	7/27/2006	1105	Soil	Grab	X	X							X	X			X				X	X	X		
JPM3-ITF-AF53(2)	247884	14	7/27/2006	1110	Soil	Grab	X	X							X	X			X				X	X	X		
JPM3-ITF-AF54(2)	247884	15	7/27/2006	1115	Soil	Grab	X	X							X	X			X				X	X	X		
JPM3-ITF-AF55(2)	247884	16	7/27/2006	1120	Soil	Grab	X	X							X	X			X				X	X	X		
JPM3-ITF-AF56(2)	247904	1	7/28/2006	900	Soil	Grab		X																			
JPM3-ITF-AF57(2)	247904	2	7/28/2006	905	Soil	Grab		X																			
JPM3-ITF-AF58(2)	247904	3	7/28/2006	910	Soil	Grab		X																			
JPM3-ITF-AF59(2)	247904	4	7/28/2006	915	Soil	Grab		X																			
JPM3-ITF-AF60(2)	247904	5	7/28/2006	920	Soil	Grab		X																			
JPM3-ITF-AF62(2)	247904	6	7/28/2006	930	Soil	Grab		X																			
JPM3-ITF-AF63(2)	247904	7	7/28/2006	935	Soil	Grab		X																			
JPM3-ITF-AF64(2)	247904	8	7/28/2006	940	Soil	Grab		X																			
JPM3-ITF-AF65(2)	247904	9	7/28/2006	945	Soil	Grab		X																			
JPM3-ITF-AF64(2)	247904	10	7/28/2006	950	Soil	Grab		X																			
JPM3-ITF-AP30(2)	247904	11	7/28/2006	955	Soil	Grab		X																			
JPM3-ITF-AP31(2)	247904	12	7/28/2006	1000	Soil	Grab		X																			
JPM3-ITF-AF58(2)-D	247904	13	7/28/2006	910	Soil	Grab		X																			
JPM3-ITF-AF60(2)-D	247904	14	7/28/2006	920	Soil	Grab		X																			
JPM3-ITF-AF67(2)	247954	1	8/1/2006	1030	Soil	Grab		X																			
JPM3-ITF-AF68(2)	247954	2	8/1/2006	1035	Soil	Grab		X																			
JPM3-ITF-AF69(2)	247954	3	8/1/2006	1040	Soil	Grab		X																			
JPM3-ITF-AF70(2)	247954	4	8/1/2006	1045	Soil	Grab		X																			
JPM3-ITF-AP32(1)	247954	5	8/1/2006	1050	Soil	Grab		X																			
JPM3-ITF-AP33(1)	247954	6	8/1/2006	1055	Soil	Grab		X																			
JPM3-ITF-AP34(1)	247954	7	8/1/2006	1100	Soil	Grab		X																			
JPM3-ITF-AP35(1)	247954	8	8/1/2006	1105	Soil	Grab		X																			
JPM3-ITF-AP34(1)-D	247954	9	8/1/2006	1100	Soil	Grab		X																			
JPM3-ITF-AP36(1)	248048	1	8/4/2006	1100	Soil	Grab		X																			

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM3-ITF-AP37(1)	248048	2	8/4/2006	1105	Soil	Grab		X																			
JPM3-ITF-AP38(1)	248048	3	8/4/2006	1110	Soil	Grab		X																			
JPM3-ITF-AP71(2)	248048	4	8/4/2006	1115	Soil	Grab		X																			
JPM3-ITF-AF72(2)	248048	5	8/4/2006	1120	Soil	Grab		X																			
JPM3-ITF-AF73(2)	248048	6	8/4/2006	1125	Soil	Grab		X																			
JPM3-ITF-AF74(2)	248048	7	8/4/2006	1130	Soil	Grab		X																			
JPM3-ITF-AF75(2)	248048	8	8/4/2006	1135	Soil	Grab		X							X	X											
JPM3-ITF-AF76(2)	248048	9	8/4/2006	1140	Soil	Grab		X																			
JPM3-ITF-AF77(2)	248048	10	8/4/2006	1145	Soil	Grab		X																			
JPM3-ITF-AF78(2)	248048	11	8/4/2006	1150	Soil	Grab		X																			
JPM3-ITF-AF79(2)	248048	12	8/4/2006	1155	Soil	Grab		X																			
JPM3-ITF-AF80(2)	248048	13	8/4/2006	1200	Soil	Grab		X																			
JPM3-ITF-AF72(2)-D	248048	14	8/4/2006	1120	Soil	Grab		X																			
JPM3-ITF-AP38(1)-D	248048	15	8/4/2006	1110	Soil	Grab		X																			
JPM3-ITF-AF81(2)	248065	1	8/7/2006	1020	Soil	Grab		X																			
JPM3-ITF-AF82(2)	248065	2	8/7/2006	1025	Soil	Grab		X																			
JPM3-ITF-AF83(2)	248065	3	8/7/2006	1030	Soil	Grab		X																			
JPM3-ITF-AF84(2)	248065	4	8/7/2006	1035	Soil	Grab		X																			
JPM3-ITF-AP44(1)	248065	5	8/7/2006	1045	Soil	Grab		X																			
JPM3-ITF-AF83(2)-D	248065	6	8/7/2006	1030	Soil	Grab		X																			
JPM3-ITF-AF85(2)	248084	1	8/8/2006	930	Soil	Grab		X																			
JPM3-ITF-AF86(2)	248084	2	8/8/2006	935	Soil	Grab		X		X									X								
JPM3-ITF-AF87(2)	248084	3	8/8/2006	940	Soil	Grab		X		X									X								
JPM3-ITF-AF88(2)	248084	4	8/8/2006	945	Soil	Grab		X																			
JPM3-ITF-AF89(2)	248084	5	8/8/2006	950	Soil	Grab		X							X												
JPM3-ITF-AF90(2)	248084	6	8/8/2006	955	Soil	Grab		X																			
JPM3-ITF-AF91(2)	248084	7	8/8/2006	1000	Soil	Grab		X																			
JPM3-ITF-AF92(2)	248084	8	8/8/2006	1005	Soil	Grab		X																			
JPM3-ITF-AF93(2)	248084	9	8/8/2006	1010	Soil	Grab		X																			
JPM3-ITF-AF94(2)	248084	10	8/8/2006	1015	Soil	Grab		X																			
JPM3-ITF-AP46(1)	248084	11	8/8/2006	1020	Soil	Grab		X								X											
JPM3-ITF-AP47(1)	248084	12	8/8/2006	1025	Soil	Grab		X							X												
JPM3-ITF-AF91(2)-D	248084	13	8/8/2006	1000	Soil	Grab		X																			
JPM3-ITF-AF75(2)	248135	1	8/4/2006	1135	Soil	Grab																					X
JPM3-ITF-AF95(2)	248160	1	8/11/2006	1015	Soil	Grab		X																			
JPM3-ITF-AF96(2)	248160	2	8/11/2006	1020	Soil	Grab		X																			

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)	
JPM3-ITF-AF97(2)	248160	3	8/11/2006	1025	Soil	Grab		X																			X	
JPM3-ITF-AF98(2)	248160	4	8/11/2006	1030	Soil	Grab		X																				
JPM3-ITF-AF99(2)	248160	5	8/11/2006	1035	Soil	Grab		X																				
JPM3-ITF-AF101(2)	248160	6	8/11/2006	1045	Soil	Grab		X																				
JPM3-ITF-AF102(2)	248160	7	8/11/2006	1050	Soil	Grab		X																				
JPM3-ITF-AF99(2)-D	248160	8	8/11/2006	1035	Soil	Grab		X																				
JPM3-ITF-AF103(2)	248182	1	8/14/2006	1300	Soil	Grab		X																				X
JPM3-ITF-AF104(2)	248182	2	8/14/2006	1305	Soil	Grab		X																				X
JPM3-ITF-AF105(2)	248182	3	8/14/2006	1310	Soil	Grab		X																				
JPM3-ITF-AF106(2)	248182	4	8/14/2006	1315	Soil	Grab		X																				
JPM3-ITF-AF107(2)	248182	5	8/14/2006	1320	Soil	Grab		X																				
JPM3-ITF-AF105(2)-D	248182	6	8/14/2006	1310	Soil	Grab																						
JPM3-ITF-AF89(2)	248187	1	8/8/2006	950	Soil	Grab																						X
JPM3-ITF-AP47(1)	248187	2	8/8/2006	1025	Soil	Grab																						X
JPM3-ITF-AF110(2)	248190	1	8/15/2006	925	Soil	Grab		X																				
JPM3-ITF-AF111(2)	248190	2	8/15/2006	930	Soil	Grab		X																				
JPM3-ITF-AF113(2)	248190	4	8/15/2006	940	Soil	Grab		X																				
JPM3-ITF-AF114(2)	248190	5	8/15/2006	945	Soil	Grab		X																				
JPM3-ITF-AF115(2)	248190	6	8/15/2006	950	Soil	Grab		X																				
JPM3-ITF-AF113(2)-D	248190	7	8/15/2006	940	Soil	Grab		X																				
JPM3-ITF-AP50(1)	248208	1	8/16/2006	1000	Soil	Grab		X																				
JPM3-ITF-AP51(1)	248208	2	8/16/2006	1005	Soil	Grab		X																				X
JPM3-ITF-AP54(1)	248208	3	8/16/2006	1020	Soil	Grab		X																				X
JPM3-ITF-AP55(1)	248208	4	8/16/2006	1025	Soil	Grab		X																				
JPM3-ITF-AP56(1)	248208	5	8/16/2006	1030	Soil	Grab		X																				X
JPM3-ITF-AP55(1)-D	248208	6	8/16/2006	1025	Soil	Grab		X																				
JPM3-ITF-AF116(2)	248233	1	8/17/2006	1100	Soil	Grab		X																				X
JPM3-ITF-AF117(2)	248233	2	8/17/2006	1105	Soil	Grab		X																				
JPM3-ITF-AF118(2)	248233	3	8/17/2006	1110	Soil	Grab		X																				X
JPM3-ITF-AF119(2)	248233	4	8/17/2006	1115	Soil	Grab		X																				X
JPM3-ITF-AF121(2)	248233	5	8/17/2006	1125	Soil	Grab		X																				
JPM3-ITF-AF122(2)	248233	6	8/17/2006	1130	Soil	Grab		X																				
JPM3-ITF-AF123(2)	248233	7	8/17/2006	1135	Soil	Grab		X																				
JPM3-ITF-AF124(2)	248233	8	8/17/2006	1140	Soil	Grab		X																				
JPM3-ITF-AP57(1)	248233	9	8/17/2006	1145	Soil	Grab		X																				X
JPM3-ITF-AF119(2)-D	248233	10	8/17/2006	1115	Soil	Grab		X																				X

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM3-ITF-AP60(1)	248248	1	8/18/2006	1040	Soil	Grab		X							X												X
JPM3-ITF-AP61(1)	248248	2	8/18/2006	1045	Soil	Grab		X																			X
JPM3-ITF-AP63(1)	248248	3	8/18/2006	1055	Soil	Grab		X																			X
JPM3-ITF-AF125(2)	248271	1	8/21/2006	1145	Soil	Grab		X																			X
JPM3-ITF-AF126(2)	248271	2	8/21/2006	1150	Soil	Grab		X																			X
JPM3-ITF-AF127(2)	248271	3	8/21/2006	1155	Soil	Grab		X																			X
JPM3-ITF-AF128(2)	248271	4	8/21/2006	1200	Soil	Grab		X																			
JPM3-ITF-AF129(2)	248271	5	8/21/2006	1205	Soil	Grab		X																			
JPM3-ITF-AF130(2)	248271	6	8/21/2006	1210	Soil	Grab		X																			
JPM3-ITF-AF131(2)	248271	7	8/21/2006	1215	Soil	Grab		X																			
JPM3-ITF-AF132(2)	248271	8	8/21/2006	1220	Soil	Grab		X																			
JPM3-ITF-AF133(2)	248271	9	8/21/2006	1225	Soil	Grab		X																			
JPM3-ITF-AF130(2)-D	248271	10	8/21/2006	1210	Soil	Grab		X																			
JPM3-ITF-AP64(1)	248289	1	8/22/2006	1000	Soil	Grab		X																			
JPM3-ITF-AP65(1)	248289	2	8/22/2006	1005	Soil	Grab		X																			
JPM3-ITF-AP66(1)	248289	3	8/22/2006	1010	Soil	Grab		X																			
JPM3-ITF-AF134(2)	248289	4	8/22/2006	1015	Soil	Grab		X																			
JPM3-ITF-AF135(2)	248289	5	8/22/2006	1020	Soil	Grab		X																			
JPM3-ITF-AF136(2)	248289	6	8/22/2006	1025	Soil	Grab		X																			
JPM3-ITF-AP67(1)	248301	1	8/23/2006	1000	Soil	Grab		X																			
JPM3-ITF-AP68(1)	248301	2	8/23/2006	1005	Soil	Grab		X																			X
JPM3-ITF-AP69(1)	248301	3	8/23/2006	1010	Soil	Grab		X																			
JPM3-ITF-AP70(1)	248301	4	8/23/2006	1015	Soil	Grab		X																			X
JPM3-ITF-AF137(2)	248301	5	8/23/2006	1020	Soil	Grab		X																			
JPM3-ITF-AF138(2)	248301	6	8/23/2006	1025	Soil	Grab		X																			
JPM3-ITF-AF139(2)	248301	7	8/23/2006	1030	Soil	Grab		X																			
JPM3-ITF-AF140(2)	248301	8	8/23/2006	1035	Soil	Grab		X							X												X
JPM3-ITF-AF141(2)	248301	9	8/23/2006	1040	Soil	Grab		X																			
JPM3-ITF-AF142(2)	248301	10	8/23/2006	1045	Soil	Grab		X																			
JPM3-ITF-AP70(1)-D	248301	11	8/23/2006	1015	Soil	Grab		X																			X
JPM3-ITF-AF130(2)	248307	1	8/21/2006	1210	Soil	Grab				X	X								X								
JPM3-ITF-AF133(2)	248307	2	8/21/2006	1225	Soil	Grab				X	X								X								
JPM3-ITF-AF130(2)-D	248307	3	8/21/2006	1210	Soil	Grab				X	X								X								
JPM3-ITF-AP2	248312	1	7/17/2006	1035	Soil	Grab																					X
JPM3-ITF-AP3	248312	2	7/17/2006	1040	Soil	Grab																					X
JPM3-ITF-AP4	248312	3	7/17/2006	1045	Soil	Grab																					X

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
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PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM3-ITF-AP8(1)	248312	4	7/19/2006	1325	Soil	Grab																					X
JPM3-ITF-AF22(3)	248312	5	7/19/2006	1440	Soil	Grab																					X
JPM3-ITF-AP13(1)	248312	6	7/24/2006	1135	Soil	Grab																					X
JPM3-ITF-AF30(2)	248312	7	7/24/2006	1200	Soil	Grab																					X
JPM3-ITF-AF44(2)	248312	8	7/25/2006	1320	Soil	Grab																					X
JPM3-ITF-AF56(2)	248312	9	7/28/2006	900	Soil	Grab																					X
JPM3-ITF-AP31(1)	248312	10	7/28/2006	1000	Soil	Grab																					X
JPM3-ITF-AP32(1)	248312	11	8/1/2006	1050	Soil	Grab																					X
JPM3-ITF-AP33(1)	248312	12	8/1/2006	1058	Soil	Grab																					X
JPM3-ITF-AF81(2)	248312	13	8/7/2006	1020	Soil	Grab																					X
JPM3-ITF-AF82(2)	248312	14	8/7/2006	1025	Soil	Grab																					X
JPM3-ITF-AP44(1)	248312	15	8/7/2006	1045	Soil	Grab																					X
JPM3-ITF-AF87(2)	248312	16	8/8/2006	940	Soil	Grab																					X
JPM3-ITF-AF90(2)	248312	17	8/8/2006	955	Soil	Grab																					X
JPM3-ITF-AP92(2)	248312	18	8/8/2006	1005	Soil	Grab																					X
JPM3-ITF-AF94(2)	248312	19	8/8/2006	1015	Soil	Grab																					X
JPM3-ITF-AP46(1)	248312	20	8/8/2006	1020	Soil	Grab																					X
JPM3-ITF-AF22(3)	248315	1	7/19/2006	1440	Soil	Grab																			X		
JPM3-ITF-AF23(2)	248315	2	7/19/2006	1445	Soil	Grab																			X		
JPM3-ITF-AF143(2)	248327	1	8/24/2006	1015	Soil	Grab		X																			X
JPM3-ITF-AF144(2)	248327	2	8/24/2006	1020	Soil	Grab		X																			
JPM3-ITF-AF145(2)	248327	3	8/24/2006	1025	Soil	Grab		X																			
JPM3-ITF-AF146(2)	248327	4	8/24/2006	1030	Soil	Grab		X																			
JPM3-ITF-AF147(2)	248327	5	8/24/2006	1035	Soil	Grab		X																			
JPM3-ITF-AF148(2)	248327	6	8/24/2006	1040	Soil	Grab		X																			X
JPM3-ITF-AP71(1)	248327	7	8/24/2006	1045	Soil	Grab		X																			
JPM3-ITF-AP72(1)	248327	8	8/24/2006	1050	Soil	Grab		X																			X
JPM3-ITF-AF145(2)-D	248327	9	8/24/2006	1025	Soil	Grab		X																			
JPM3-ITF-AF149(2)	248379	1	8/28/2006	1200	Soil	Grab		X							X												
JPM3-ITF-AF150(2)	248379	2	8/28/2006	1205	Soil	Grab		X							X												
JPM3-ITF-AF151(2)	248379	3	8/28/2006	1210	Soil	Grab		X							X												
JPM3-ITF-AF152(2)	248379	4	8/28/2006	1215	Soil	Grab		X							X												
JPM3-ITF-AF153(2)	248379	5	8/28/2006	1220	Soil	Grab		X		X	X				X				X								
JPM3-ITF-AF154(2)	248379	6	8/28/2006	1225	Soil	Grab		X		X	X				X				X								
JPM3-ITF-AF155(2)	248379	7	8/28/2006	1230	Soil	Grab		X							X												
JPM3-ITF-AP73(1)	248379	8	8/28/2006	1235	Soil	Grab		X							X												

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM3-ITF-AP74(1)	248379	9	8/28/2006	1240	Soil	Grab		X							X												
JPM3-ITF-AF153(2)-D	248379	10	8/28/2006	1220	Soil	Grab		X		X	X				X				X								
JPM3-ITF-AF156(2)	248423	1	8/30/2006	1230	Soil	Grab		X																			
JPM3-ITF-AF157(2)	248423	2	8/30/2006	1235	Soil	Grab		X																			
JPM3-ITF-AF158(2)	248423	3	8/30/2006	1240	Soil	Grab		X																			
JPM3-ITF-AF159(2)	248423	4	8/30/2006	1245	Soil	Grab		X																			
JPM3-ITF-AF160(2)	248423	5	8/30/2006	1250	Soil	Grab		X																			X
JPM3-ITF-AF161(2)	248423	6	8/30/2006	1255	Soil	Grab		X																			X
JPM3-ITF-AF162(2)	248423	7	8/30/2006	1300	Soil	Grab		X																			X
JPM3-ITF-AF163(2)	248423	8	8/30/2006	1305	Soil	Grab		X																			
JPM3-ITF-AF164(2)	248423	9	8/30/2006	1310	Soil	Grab		X																			
JPM3-ITF-AF165(2)	248423	10	8/30/2006	1315	Soil	Grab		X																			
JPM3-ITF-AF166(2)	248423	11	8/30/2006	1320	Soil	Grab		X																			
JPM3-ITF-AF161(2)-D	248423	12	8/30/2006	1255	Soil	Grab		X																			
JPM3-ITF-AF167(2)	248439	1	8/31/2006	1015	Soil	Grab		X																			
JPM3-ITF-AP73(1)	248454	1	8/28/2006	1235	Soil	Grab																					X
JPM3-ITF-AP74(1)	248454	2	8/28/2006	1240	Soil	Grab																					X
JPM3-ITF-AP76(1)	248470	1	8/31/2006	1300	Soil	Grab		X																			X
JPM3-UNKNOWN MATERIAL	248470	2	8/31/2006	1310	Miscellaneous	Grab	X	X		X	X																X
JPM3-ITF-AP77(1)	248537	1	9/7/2006	1145	Soil	Grab		X																			X
JPM3-ITF-AP78(1)	248537	2	9/7/2006	1150	Soil	Grab		X																			
JPM3-ITF-AF168(2)	248537	3	9/7/2006	1155	Soil	Grab		X																			
JPM3-ITF-AF171	248926	1	9/29/2006	1110	Soil	Grab		X							X												
JPM3-ITF-AF173	248926	2	9/29/2006	1120	Soil	Grab		X																			X
JPM3-ITF-AF175	248926	3	9/29/2006	1130	Soil	Grab		X																			X
JPM3-ITF-AP80	248926	4	9/29/2006	1200	Soil	Grab		X																			X
JPM3-ITF-AF169	248926	5	9/29/2006	1100	Soil	Grab		X																			
JPM3-ITF-AF170	248926	6	9/29/2006	1105	Soil	Grab		X																			
JPM3-ITF-AF172	248926	7	9/29/2006	1115	Soil	Grab		X																			
JPM3-ITF-AF176	248926	8	9/29/2006	1135	Soil	Grab		X																			
JPM3-ITF-AF177	248926	9	9/29/2006	1140	Soil	Grab		X																			
JPM3-ITF-AF178	248926	10	9/29/2006	1145	Soil	Grab		X																			
JPM3-ITF-AF179	248926	11	9/29/2006	1150	Soil	Grab		X																			
JPM12-DITCH-CP2	248927	1	9/29/2006	1305	Soil	Grab									X												X
JPM12-DITCH-CP3	248927	2	9/29/2006	1310	Soil	Grab									X												X
JPM12-DITCH-CP4	248927	3	9/29/2006	1315	Soil	Grab									X												X

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM12-DITCH-CP5	248927	4	9/29/2006	1320	Soil	Grab									X											X	
JPM12-DITCH-CP6	248927	5	9/29/2006	1325	Soil	Grab									X											X	
JPM12-DITCH-CP7	248927	6	9/29/2006	1330	Soil	Grab									X											X	
JPM12-DITCH-CP8	248927	7	9/29/2006	1335	Soil	Grab									X											X	
JPM12-DITCH-CP9	248927	8	9/29/2006	1340	Soil	Grab									X											X	
JPM12-DITCH-CP10	248927	9	9/29/2006	1345	Soil	Grab									X											X	
JPM12-DITCH-CP12	248927	10	9/29/2006	1355	Soil	Grab									X											X	
JPM12-DITCH-CP13	248927	11	9/29/2006	1400	Soil	Grab									X											X	
JPM12-DITCH-CP14	248927	12	9/29/2006	1405	Soil	Grab									X											X	
JPM3-ITF-AF180(2)	248981	1	10/3/2006	900	Soil	Grab		X							X												
JPM3-ITF-AF181(2)	248981	2	10/3/2006	905	Soil	Grab		X							X												
JPM3-ITF-AF182(2)	248981	3	10/3/2006	910	Soil	Grab		X							X												
JPM3-ITF-AF183(2)	248981	4	10/3/2006	915	Soil	Grab		X							X												
JPM3-ITF-AF184(2)	248981	5	10/3/2006	920	Soil	Grab		X							X												
JPM3-ITF-AF185(2)	248981	6	10/3/2006	925	Soil	Grab		X							X												
JPM3-ITF-AF186(2)	248981	7	10/3/2006	930	Soil	Grab		X							X												
JPM3-ITF-AF187(2)	248981	8	10/3/2006	935	Soil	Grab		X							X												
JPM3-ITF-AF188(2)	248981	9	10/3/2006	940	Soil	Grab		X							X												
JPM3-ITF-AF189(2)	248981	10	10/3/2006	945	Soil	Grab		X							X												
JPM3-ITF-AF190(2)	248981	11	10/3/2006	950	Soil	Grab		X							X												
JPM3-ITF-AF191(2)	248981	12	10/3/2006	955	Soil	Grab		X							X												
JPM3-ITF-AP81(1)	248981	13	10/3/2006	1000	Soil	Grab		X							X												
JPM3-ITF-AP82(1)	248981	14	10/3/2006	1005	Soil	Grab		X							X												
JPM3-ITF-AP83(1)	248981	15	10/3/2006	1010	Soil	Grab		X							X												
JPM3-ITF-AF186(2)-D	248981	16	10/3/2006	930	Soil	Grab		X							X												
JPM3-ITF-AF192(2)	249025	1	10/5/2006	800	Soil	Grab		X							X												
JPM3-ITF-AF193(2)	249025	2	10/5/2006	805	Soil	Grab	X	X							X												
JPM3-ITF-AF194(2)	249025	3	10/5/2006	810	Soil	Grab		X							X												
JPM3-ITF-AF195(2)	249025	4	10/5/2006	815	Soil	Grab		X							X											X	
JPM3-ITF-AF196(2)	249025	5	10/5/2006	820	Soil	Grab		X							X												
JPM3-ITF-AF197(2)	249025	6	10/5/2006	825	Soil	Grab		X				X		X	X												
JPM3-ITF-AF198(2)	249025	7	10/5/2006	830	Soil	Grab		X							X												
JPM3-ITF-AF199(2)	249025	8	10/5/2006	835	Soil	Grab		X							X												
JPM3-ITF-AF200(2)	249025	9	10/5/2006	840	Soil	Grab		X							X												
JPM3-ITF-AF201(2)	249025	10	10/5/2006	845	Soil	Grab		X							X											X	
JPM3-ITF-AF202(2)	249025	11	10/5/2006	850	Soil	Grab		X							X												

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM3-ITF-AP85(2)	249025	12	10/5/2006	900	Soil	Grab		X																			
JPM3-ITF-AF195(2)-D	249025	13	10/5/2006	815	Soil	Grab		X																		X	
JPM4-CP1	249049	1	10/6/2006	800	Soil	Grab									X												
JPM4-CP2	249049	2	10/6/2006	805	Soil	Grab									X												
JPM4-CP3	249049	3	10/6/2006	810	Soil	Grab									X												
JPM4-CP4	249049	4	10/6/2006	815	Soil	Grab									X												
JPM4-CP5	249049	5	10/6/2006	820	Soil	Grab									X												
JPM4-CP6	249049	6	10/6/2006	825	Soil	Grab									X												
JPM4-CP7	249049	7	10/6/2006	830	Soil	Grab									X												
JPM4-CP8	249049	8	10/6/2006	835	Soil	Grab									X												
JPM4-CP9	249049	9	10/6/2006	840	Soil	Grab									X												
JPM4-CP10	249049	10	10/6/2006	845	Soil	Grab									X												
JPM4-CP11	249049	11	10/6/2006	850	Soil	Grab									X												
JPM4-CP12	249049	12	10/6/2006	855	Soil	Grab									X												
JPM4-CP13	249049	13	10/6/2006	900	Soil	Grab									X												
JPM4-CP14	249049	14	10/6/2006	905	Soil	Grab									X												
JPM4-CP15	249049	15	10/6/2006	910	Soil	Grab									X												
JPM4-CP16	249049	16	10/6/2006	915	Soil	Grab									X												
JPM4-CP17	249049	17	10/6/2006	920	Soil	Grab									X												
JPM4-CP18	249049	18	10/6/2006	925	Soil	Grab									X												
JPM4-CP19	249049	19	10/6/2006	930	Soil	Grab									X												
JPM4-CP20	249049	20	10/6/2006	935	Soil	Grab									X												
JPM4-CP21	249049	21	10/6/2006	940	Soil	Grab									X												
JPM4-CP22	249049	22	10/6/2006	945	Soil	Grab									X												
JPM4-CP23	249049	23	10/6/2006	950	Soil	Grab									X												
JPM4-CP24	249049	24	10/6/2006	955	Soil	Grab									X												
JPM4-CP25	249049	25	10/6/2006	1000	Soil	Grab									X												
JPM4-CP26	249049	26	10/6/2006	1005	Soil	Grab									X												
JPM4-CP27	249049	27	10/6/2006	1010	Soil	Grab									X												
JPM12-CP1	249049	28	10/6/2006	1100	Soil	Grab									X												
JPM12-CP2	249049	29	10/6/2006	1105	Soil	Grab									X												
JPM12-CP3	249049	30	10/6/2006	1110	Soil	Grab									X												
JPM12-CP4	249049	31	10/6/2006	1115	Soil	Grab									X												
JPM12-CP5	249049	32	10/6/2006	1120	Soil	Grab									X												
JPM12-CP6	249049	33	10/6/2006	1125	Soil	Grab									X												
JPM3-ITF-AF204(2)	249072	1	10/9/2006	1005	Soil	Grab		X																			

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM3-ITF-AF205(2)	249072	2	10/9/2006	1010	Soil	Grab		X																			
JPM3-ITF-AF206(2)	249072	3	10/9/2006	1015	Soil	Grab		X																			
JPM3-ITF-AF207(2)	249072	4	10/9/2006	1020	Soil	Grab		X																			X
JPM3-ITF-AF208(2)	249072	5	10/9/2006	1025	Soil	Grab		X																			
JPM3-ITF-AF209(2)	249072	6	10/9/2006	1030	Soil	Grab		X																			X
JPM3-ITF-AF211(2)	249072	7	10/9/2006	1040	Soil	Grab		X																			
JPM3-ITF-AP86(1)	249072	8	10/9/2006	1050	Soil	Grab		X																			
JPM3-ITF-AP87(1)	249072	9	10/9/2006	1055	Soil	Grab		X																			X
JPM3-ITF-AP88(1)	249072	10	10/9/2006	1100	Soil	Grab		X																			X
JPM3-ITF-AP89(1)	249072	11	10/9/2006	1105	Soil	Grab		X																			X
JPM3-ITF-AF204(2)-D	249072	12	10/9/2006	1005	Soil	Grab		X																			
JPM3-CP15	249072	13	10/9/2006	900	Soil	Grab									X												
JPM3-CP16	249072	14	10/9/2006	905	Soil	Grab									X												
JPM3-CP17	249072	15	10/9/2006	910	Soil	Grab									X												
JPM3-ITF-AF200(2)	249106	1	10/5/2006	840	Soil	Grab																					X
JPM12-DITCH-CP12	249117	1	10/6/2006	1355	Soil	Grab																					X
JPM4-CP7	249117	2	10/6/2006	830	Soil	Grab																					X
JPM4-CP12	249117	3	10/6/2006	855	Soil	Grab																					X
JPM4-CP13	249117	4	10/6/2006	900	Soil	Grab																					X
JPM4-CP114	249117	5	10/6/2006	905	Soil	Grab																					X
JPM4-CP115	249117	6	10/6/2006	910	Soil	Grab																					X
JPM4-CP116	249117	7	10/6/2006	915	Soil	Grab																					X
JPM4-CP118	249117	8	10/6/2006	925	Soil	Grab																					X
JPM4-CP120	249117	9	10/6/2006	935	Soil	Grab																					X
JPM12-CP1	249117	10	10/6/2006	1100	Soil	Grab																					X
JPM12-CP2	249117	11	10/6/2006	1105	Soil	Grab																					X
JPM12-CP3	249117	12	10/6/2006	1110	Soil	Grab																					X
JPM12-CP4	249117	13	10/6/2006	1115	Soil	Grab																					X
JPM12-CP15	249117	14	10/9/2007	900	Soil	Grab																					X
JPM12-CP17	249117	15	10/9/2007	910	Soil	Grab																					X
JPM3-CP7-16	249144	1	10/13/2006	1300	Soil	Grab	X								X												X
JPM3-CP7-17	249144	2	10/13/2006	1305	Soil	Grab	X								X												X
JPM3-CP7-18	249144	3	10/13/2006	1310	Soil	Grab	X								X												X
JPM3-CP7-19	249144	4	10/13/2006	1315	Soil	Grab	X								X												X
JPM3-CP7-20	249144	5	10/13/2006	1320	Soil	Grab	X								X												X
JPM3-CP7-21	249144	6	10/13/2006	1325	Soil	Grab	X								X												X

TCLP - Toxicity Characteristic Leaching Procedure
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PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM3-CP7-22	249144	7	10/13/2006	1330	Soil	Grab	X							X												X	
JPM3-CP7-23	249144	8	10/13/2006	1335	Soil	Grab	X							X												X	
JPM4-LA6DON-1(1)	249145	1	10/13/2006	730	Soil	Grab								X												X	
JPM4-LA6DON-1(2)	249145	2	10/13/2006	735	Soil	Grab								X												X	
JPM4-LA6DON-1(3)	249145	3	10/13/2006	740	Soil	Grab								X												X	
JPM4-LA6DON-1(4)	249145	4	10/13/2006	745	Soil	Grab								X												X	
JPM4-LA6DON-2(1)	249145	5	10/13/2006	750	Soil	Grab								X												X	
JPM4-LA6DON-2(2)	249145	6	10/13/2006	755	Soil	Grab								X												X	
JPM4-LA6DON-2(3)	249145	7	10/13/2006	800	Soil	Grab								X												X	
JPM4-LA6DON-2(4)	249145	8	10/13/2006	802	Soil	Grab								X												X	
JPM4-LA6DON-3(1)	249145	9	10/13/2006	810	Soil	Grab								X												X	
JPM4-LA6DON-3(2)	249145	10	10/13/2006	815	Soil	Grab								X												X	
JPM4-LA6DON-3(3)	249145	11	10/13/2006	820	Soil	Grab								X												X	
JPM4-LA6DON-3(4)	249145	12	10/13/2006	825	Soil	Grab								X												X	
JPM3-ITF-AF213(2)	249177	1	10/17/2006	900	Soil	Grab		X						X													
JPM3-ITF-AF214(2)	249177	2	10/17/2006	905	Soil	Grab		X						X													
JPM3-ITF-AF215(2)	249177	3	10/17/2006	910	Soil	Grab		X						X													
JPM3-ITF-AF216(2)	249177	4	10/17/2006	915	Soil	Grab		X						X													
JPM3-ITF-AF217(2)	249177	5	10/17/2006	920	Soil	Grab		X						X													
JPM3-ITF-AF218(2)	249177	6	10/17/2006	925	Soil	Grab		X						X													
JPM3-ITF-AF219(2)	249177	7	10/17/2006	930	Soil	Grab		X						X													
JPM3-ITF-AF220(2)	249177	8	10/17/2006	935	Soil	Grab		X						X													
JPM3-ITF-AF221(2)	249177	9	10/17/2006	940	Soil	Grab		X						X													
JPM3-ITF-AP90(1)	249177	10	10/17/2006	945	Soil	Grab		X						X													
JPM3-ITF-AP91(1)	249177	11	10/17/2006	950	Soil	Grab		X						X													
JPM3-ITF-AF221(2)-D	249177	12	10/17/2006	940	Soil	Grab		X						X													
JPM3-CP7-18	249183	1	10/13/2006	1310	Soil	Grab																					
JPM4-CP4(1)	249220	1	10/19/2006	1300	Soil	Grab								X												X	
JPM4-CP4(2)	249220	2	10/19/2006	1305	Soil	Grab								X												X	
JPM4-CP4(3)	249220	3	10/19/2006	1310	Soil	Grab								X												X	
JPM4-CP5(1)	249220	4	10/19/2006	1315	Soil	Grab								X												X	
JPM4-CP5(2)	249220	5	10/19/2006	1320	Soil	Grab								X												X	
JPM4-CP5(3)	249220	6	10/19/2006	1325	Soil	Grab								X												X	
JPM4-CP6(1)	249220	7	10/19/2006	1330	Soil	Grab								X												X	
JPM4-CP6(2)	249220	8	10/19/2006	1335	Soil	Grab								X												X	
JPM4-CP6(3)	249220	9	10/19/2006	1340	Soil	Grab								X												X	

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)	
JPM4-CP31(0.5)	249221	1	10/19/2006	1100	Soil	Grab									X											X		
JPM4-CP32(0.5)	249221	2	10/19/2006	1105	Soil	Grab									X												X	
JPM4-CP33(0.5)	249221	3	10/19/2006	1110	Soil	Grab									X												X	
JPM3-ITF-AP90(1)	249239	1	10/17/2006	945	Soil	Grab																					X	
JPM3-ITF-AP91(1)	249239	2	10/17/2006	950	Soil	Grab																					X	
JPM3-ITF-AF222(2)	249240	1	10/20/2006	1100	Soil	Grab		X																			X	
JPM3-ITF-AF223(2)	249240	2	10/20/2006	1105	Soil	Grab		X																			X	
JPM3-ITF-AF224(2)	249240	3	10/20/2006	1110	Soil	Grab		X																			X	
JPM3-ITF-AF225(2)	249240	4	10/20/2006	1115	Soil	Grab		X																			X	
JPM3-ITF-AF226(2)	249240	5	10/20/2006	1120	Soil	Grab		X																			X	
JPM3-ITF-AF227(2)	249240	6	10/20/2006	1125	Soil	Grab		X																			X	
JPM3-ITF-AF228(2)	249240	7	10/20/2006	1130	Soil	Grab		X																			X	
JPM3-ITF-AF229(2)	249240	8	10/20/2006	1135	Soil	Grab		X																			X	
JPM3-ITF-AF230(2)	249240	9	10/20/2006	1140	Soil	Grab		X																			X	
JPM3-ITF-AF231(2)	249240	10	10/20/2006	1145	Soil	Grab		X							X												X	
JPM3-ITF-AF232(2)	249240	11	10/20/2006	1150	Soil	Grab		X																			X	
JPM3-ITF-AF233(2)	249240	12	10/20/2006	1155	Soil	Grab		X							X												X	
JPM3-ITF-AF234(2)	249240	13	10/20/2006	1200	Soil	Grab		X																			X	
JPM3-ITF-AF231(2)	249276	1	10/20/2006	1145	Soil	Grab																					X	
JPM3ITFCP1-1(1)	249398	1	11/1/2006	930	Soil	Grab		X							X												X	
JPM3ITFCP1-2(1)	249398	2	11/1/2006	935	Soil	Grab		X							X												X	
JPM3ITFCP1-3(1)	249398	3	11/1/2006	940	Soil	Grab		X							X												X	
JPM3ITFCP1-4(1)	249398	4	11/1/2006	945	Soil	Grab	X	X							X												X	
JPM3ITFCP1-5(1)	249398	5	11/1/2006	950	Soil	Grab	X	X							X												X	
JPM3ITFCP1-6(1)	249398	6	11/1/2006	955	Soil	Grab	X	X							X												X	
JPM3ITFCP1-7(1)	249398	7	11/1/2006	1000	Soil	Grab	X	X							X												X	
JPM3ITFCP1-8(1)	249398	8	11/1/2006	1005	Soil	Grab	X	X							X												X	
JPM3ITFCP1-9(1)	249398	9	11/1/2006	1010	Soil	Grab	X	X							X												X	
JPM3ITFCP1-10(1)	249398	10	11/1/2006	1015	Soil	Grab		X							X				X	X							X	
JPM3ITFCP1-11(1)	249398	11	11/1/2006	1020	Soil	Grab		X							X		X		X	X							X	
JPM3ITFCP1-12(1)	249398	12	11/1/2006	1025	Soil	Grab		X							X												X	
JPM3ITFCP1-13(1)	249398	13	11/1/2006	1030	Soil	Grab		X							X												X	
JPM3ITFCP1-14(1)	249398	14	11/1/2006	1035	Soil	Grab		X							X		X		X	X							X	
JPM3ITFCP1-15(1)	249398	15	11/1/2006	1040	Soil	Grab		X							X		X		X	X							X	
JPM3ITFCP1-16(1)	249398	16	11/1/2006	1045	Soil	Grab	X	X							X												X	
JPM3ITFCP1-17(1)	249398	17	11/1/2006	1050	Soil	Grab	X	X							X												X	

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)	
JPM3ITFCP1-18(1)	249398	18	11/1/2006	1055	Soil	Grab	X	X							X											X		
JPM3ITFCP1-19(1)	249398	19	11/1/2006	1100	Soil	Grab		X							X												X	
JPM3ITFCP1-20(1)	249398	20	11/1/2006	1105	Soil	Grab		X							X												X	
JPM3ITFCP1-21(1)	249398	21	11/1/2006	1110	Soil	Grab		X							X												X	
JPM3-ITF-AF235(2)	249439	1	11/3/2006	1030	Soil	Grab		X																			X	
JPM3-ITF-AF236(2)	249439	2	11/3/2006	1035	Soil	Grab		X							X													
JPM3-ITF-AF237(2)	249439	3	11/3/2006	1040	Soil	Grab		X																			X	
JPM3-ITF-AF238(2)	249439	4	11/3/2006	1045	Soil	Grab		X																			X	
JPM3-ITF-AF239(2)	249439	5	11/3/2006	1050	Soil	Grab		X																			X	
JPM3-ITF-AF240(2)	249439	6	11/3/2006	1055	Soil	Grab		X																			X	
JPM3-ITF-AF241(2)	249439	7	11/3/2006	1100	Soil	Grab		X																			X	
JPM3-ITF-CP1-18(1)	249477	1	11/1/2006	1055	Soil	Grab	X																					
JPM3-ITF-AF236(2)	249477	2	11/3/2006	1035	Soil	Grab																					X	
JPM3-ITF-AF242(2)	249487	1	11/8/2006	1100	Soil	Grab		X																			X	
JPM3-ITF-AF243(2)	249487	2	11/8/2006	1105	Soil	Grab		X																				
JPM3-ITF-AF244(2)	249487	3	11/8/2006	1110	Soil	Grab		X																				
JPM3-ITF-AF245(2)	249487	4	11/8/2006	1115	Soil	Grab		X																				
JPM3-ITF-AF246(2)	249487	5	11/8/2006	1120	Soil	Grab		X																				
JPM3-ITF-AF247(2)	249487	6	11/8/2006	1125	Soil	Grab		X																			X	
JPM3-ITF-AF92(2)	249487	7	11/8/2006	1130	Soil	Grab		X																				
JPM3-ITF-AF93(2)	249487	8	11/8/2006	1135	Soil	Grab		X																			X	
JPM3-ITF-AF244(2)	249487	9	11/8/2006	1110	Soil	Grab		X																				
JPM3-ITF-CP-1-22(0.5)	249510	1	11/9/2006	1000	Soil	Grab									X												X	
JPM12-CP7(0.5)	249511	1	11/9/2006	1100	Soil	Grab																					X	
JPM12-CP8(0.5)	249511	2	11/9/2006	1105	Soil	Grab									X												X	
JPM12-CP9(0.5)	249511	3	11/9/2006	1110	Soil	Grab																					X	
JPM12-CP11(0.5)	249511	4	11/9/2006	1120	Soil	Grab																					X	
JPM12-AP1(1)	249544	1	11/14/2006	1300	Soil	Grab									X												X	
JPM12-AP2(1)	249544	2	11/14/2006	1305	Soil	Grab									X												X	
JPM12-AP3(1)	249544	3	11/14/2006	1310	Soil	Grab									X												X	
JPM12-AP4(1)	249544	4	11/14/2006	1315	Soil	Grab									X												X	
JPM12-AP5(1)	249544	5	11/14/2006	1320	Soil	Grab									X												X	
JPM12-AP6(1)	249544	6	11/14/2006	1325	Soil	Grab									X												X	
JPM12-AP7(1)	249544	7	11/14/2006	1330	Soil	Grab									X												X	
JPM12-AP8(1)	249544	8	11/14/2006	1335	Soil	Grab									X												X	
JPM12-AP9(1)	249544	9	11/14/2006	1340	Soil	Grab									X												X	

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM12-AP21(1)	249563	1	11/15/2006	1135	Soil	Grab																					X
JPM12-AP24(1)	249563	2	11/15/2006	1150	Soil	Grab																					X
JPM12-AP10(1)	249563	3	11/15/2006	1040	Soil	Grab									X												X
JPM12-AP11(1)	249563	4	11/15/2006	1045	Soil	Grab									X												X
JPM12-AP12(1)	249563	5	11/15/2006	1050	Soil	Grab									X												X
JPM12-AP13(1)	249563	6	11/15/2006	1055	Soil	Grab									X												X
JPM12-AF3(1)	249563	7	11/15/2006	1205	Soil	Grab									X												X
JPM12-AF4(2)	249563	8	11/15/2006	1210	Soil	Grab		X			X				X												X
JPM12-AF5(2)	249576	1	11/16/2006	1030	Soil	Grab									X												X
JPM12-AF6(2)	249576	2	11/16/2006	1035	Soil	Grab									X												X
JPM12-AF7(2)	249576	3	11/16/2006	1040	Soil	Grab									X												X
JPL2-ASH	249602	1	11/17/2006	1330	Soil	Grab	X								X												X
JPL2-CP26(1)	249603	1	11/17/2006	1105	Soil	Grab																					X
JPL2-CP31(1)	249603	2	11/17/2006	1130	Soil	Grab	X																				
JPL2-CP37(1)	249603	3	11/17/2006	1200	Soil	Grab	X																				
JPL2-CP38(1)	249603	4	11/17/2006	1205	Soil	Grab	X																				
JPL2-CP39(1)	249603	5	11/17/2006	1210	Soil	Grab	X																				
JPL2-CP41(1)	249603	6	11/17/2006	1220	Soil	Grab	X																				
JPL2-CP42(1)	249603	7	11/17/2006	1225	Soil	Grab	X																				
JPL2-CP43(1)	249603	8	11/17/2006	1230	Soil	Grab	X																				
JPM12-AP31(1)	249616	1	11/20/2006	1235	Soil	Grab																					X
JPM12-AP34(1)	249616	2	11/20/2006	1250	Soil	Grab																					X
JPM12-AP35(1)	249616	3	11/20/2006	1255	Soil	Grab																					X
JPM12-AP42(1)	249616	4	11/20/2006	1330	Soil	Grab																					X
JPM12-AP43(1)	249616	5	11/20/2006	1335	Soil	Grab																					X
JPM12-AP44(1)	249616	6	11/20/2006	1340	Soil	Grab																					X
JPM12-AP45(1)	249623	2	11/21/2006	1230	Soil	Grab									X												X
JPM12-AP46(1)	249623	2	11/21/2006	1235	Soil	Grab									X												X
JPM12-AP47(1)	249623	3	11/21/2006	1240	Soil	Grab									X												X
JPM12-AP48(1)	249623	4	11/21/2006	1245	Soil	Grab									X												X
JPM12-AP49(1)	249623	5	11/21/2006	1250	Soil	Grab									X												X
JPM12-AP50(1)	249623	6	11/21/2006	1255	Soil	Grab									X												X
JPM12-AP51(1)	249623	7	11/21/2006	1300	Soil	Grab									X												X
JPM12-AP52(1)	249623	8	11/21/2006	1305	Soil	Grab									X												X
JPM12-AP53(1)	249623	9	11/21/2006	1310	Soil	Grab									X												X
JPM12-AP54(1)	249623	10	11/21/2006	1315	Soil	Grab									X												X

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CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM12-AP56(1)	249634	1	11/22/2006	1005	Soil	Grab																					X
JPM12-AP58(1)	249634	2	11/22/2006	1015	Soil	Grab																					X
JPM12-AP65(1)	249645	1	11/27/2006	1320	Soil	Grab																					X
JPM12-AP69(1)	249674	1	11/29/2006	1040	Soil	Grab																					X
JPM12-AP72(1)	249674	2	11/29/2006	1055	Soil	Grab									X												X
JPM12-AF10(2)	249674	3	11/29/2006	1100	Soil	Grab									X												X
JPM12-AF11(2)	249674	4	11/29/2006	1105	Soil	Grab									X												X
JPM2-AP76(1)	249743	1	12/5/2006	1145	Soil	Grab									X												X
JPM2-AP78(1)	249743	2	12/5/2006	1150	Soil	Grab									X												X
JPM2-AP79(1)	249743	3	12/5/2006	1200	Soil	Grab									X												X
JPM2-AP81(1)	249743	4	12/5/2006	1210	Soil	Grab									X												X
JPM2-AP82(1)	249743	5	12/5/2006	1215	Soil	Grab									X												X
JPM2-AP83(1)	249743	6	12/5/2006	1300	Soil	Grab									X												X
JPM3-AF3(1)	249754	1	12/6/2006	1450	Soil	Grab									X												X
JPM3-AF1(4)	249754	2	12/6/2006	1500	Soil	Grab									X												X
JPM3-AF2(4)	249754	3	12/6/2006	1505	Soil	Grab									X												X
JPM3-AF3(4)	249754	4	12/6/2006	1510	Soil	Grab									X												X
JPM3-LEAD A 21 DE LAGOON E	249776	1	12/7/2006	1400	Soil	Grab	X								X												X
JPM4-AP4(1)	249777	1	12/7/2006	1200	Soil	Grab									X												X
JPM4-AP5(1)	249777	2	12/7/2006	1205	Soil	Grab									X												X
JPM4-AP6(1)	249777	3	12/7/2006	1210	Soil	Grab									X												X
JPM4-AP7(1)	249777	4	12/7/2006	1215	Soil	Grab									X												X
JPM4-AP8(1)	249777	5	12/7/2006	1220	Soil	Grab									X												X
JPM4-AP9(1)	249777	6	12/7/2006	1225	Soil	Grab									X												X
JPM4-AP10(1)	249777	7	12/7/2006	1230	Soil	Grab									X												X
JPM4-AF4(2)	249777	8	12/7/2006	1235	Soil	Grab									X												X
JPM4-AF5(2)	249777	9	12/7/2006	1240	Soil	Grab									X												X
JPM4-AF6(2)	249777	10	12/7/2006	1245	Soil	Grab									X												X
JPM4-AP1(1)	249777	11	12/7/2006	1430	Soil	Grab									X												X
JPM12-AP84(1)	249895	1	12/18/2006	1400	Soil	Grab									X												X
JPM12-AP85(1)	249895	2	12/18/2006	1405	Soil	Grab									X												X
JPM3-ITF-AP98(1)	249944	1	12/27/2006	1315	Soil	Grab	X	X							X												
JPM3-ITF-AP99(1)	249944	2	12/27/2006	1320	Soil	Grab	X	X							X												
JPM3-ITF-AF249(3)	249944	3	12/27/2006	1325	Soil	Grab	X	X							X												
JPM3-ITF-AF250(3)	249944	4	12/27/2006	1330	Soil	Grab	X	X							X												
JPM3-ITF-AF251(3)	249944	5	12/27/2006	1335	Soil	Grab	X	X							X	X	X	X									

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM3-ITF-AF252(3)	249944	6	12/27/2006	1340	Soil	Grab	X	X							X												
JPM3-ITF-AF253(3)	249944	7	12/27/2006	1345	Soil	Grab	X	X							X		X										
JPM3-ITF-AF254(3)	249944	8	12/27/2006	1350	Soil	Grab	X	X							X				X	X							
JPM3-STOCKPILE-TCLP	249945	1	12/27/2006	1400	Soil	Grab																					X
JPL5-A1(1)	249966	1	1/2/2007	1000	Soil	Grab					X				X												
JPL5-A2(1)	249966	2	1/2/2007	1005	Soil	Grab					X				X												
JPL5-A3(1)	249966	3	1/2/2007	1010	Soil	Grab					X				X												
JPL5-A4(1)	249966	4	1/2/2007	1015	Soil	Grab					X				X												
JPL5-A5(1)	249966	5	1/2/2007	1020	Soil	Grab					X				X												
JPL5-B1(1)	249966	6	1/2/2007	1025	Soil	Grab					X				X												
JPL5-B2(1)	249966	7	1/2/2007	1030	Soil	Grab					X				X												
JPL5-B3(1)	249966	8	1/2/2007	1035	Soil	Grab					X				X												
JPL5-B4(1)	249966	9	1/2/2007	1040	Soil	Grab					X				X												
JPL5-B5(1)	249966	10	1/2/2007	1045	Soil	Grab					X				X												
JPL5-C1(1)	249972	1	1/3/2007	1000	Soil	Grab					X																
JPL5-C2(1)	249972	2	1/3/2007	1020	Soil	Grab					X																
JPL5-C3(1)	249972	3	1/3/2007	1040	Soil	Grab					X																
JPL5-C4(1)	249972	4	1/3/2007	1060	Soil	Grab					X																X
JPL5-C5(1)	249972	5	1/3/2007	1080	Soil	Grab					X																
JPL5-D1(1)	249972	6	1/3/2007	1100	Soil	Grab					X																
JPL5-D2(1)	249972	7	1/3/2007	1120	Soil	Grab					X																
JPL5-D3(1)	249972	8	1/3/2007	1140	Soil	Grab					X																
JPL5-D4(1)	249972	9	1/3/2007	1160	Soil	Grab					X				X												
JPL5-D5(1)	249972	10	1/3/2007	1180	Soil	Grab					X																
JPM3-ITF-AF250(3)	249973	1	12/27/2006	1330	Soil	Grab																					X
JPM3-ITF-AF252(3)	249973	2	12/27/2006	1340	Soil	Grab																					X
JPM3-ITF-AF253(3)	249973	3	12/27/2006	1345	Soil	Grab																					X
JPM3-ITF-AF254(3)	249973	4	12/27/2006	1350	Soil	Grab																					X
JPL5-E1(1)	249981	1	1/4/2007	1000	Soil	Grab					X																
JPL5-E2(1)	249981	2	1/4/2007	1020	Soil	Grab					X																
JPL5-E3(1)	249981	3	1/4/2007	1040	Soil	Grab					X																
JPL5-E4(1)	249981	4	1/4/2007	1100	Soil	Grab					X																X
JPL5-E5(1)	249981	5	1/4/2007	1120	Soil	Grab					X																X
JPL5-F1(1)	249981	6	1/4/2007	1140	Soil	Grab					X																
JPL5-F2(1)	249981	7	1/4/2007	1200	Soil	Grab					X																
JPL5-F3(1)	249981	8	1/4/2007	1220	Soil	Grab					X																

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)	
JPL5-F4(1)	249981	9	1/4/2007	1240	Soil	Grab						X																
JPL5-F5(1)	249981	10	1/4/2007	1300	Soil	Grab						X																
JPL5-G1(1)	249992	1	1/5/2007	1100	Soil	Grab						X			X													
JPL5-G2(1)	249992	2	1/5/2007	1120	Soil	Grab						X			X													
JPL5-G3(1)	249992	3	1/5/2007	1140	Soil	Grab						X			X													
JPL5-G4(1)	249992	4	1/5/2007	1200	Soil	Grab						X			X													
JPL5-G5(1)	249992	5	1/5/2007	1220	Soil	Grab						X			X													
JPL5-H1(1)	249992	6	1/5/2007	1240	Soil	Grab						X			X													
JPL5-H2(1)	249992	7	1/5/2007	1300	Soil	Grab						X			X													
JPL5-H3(1)	249992	8	1/5/2007	1320	Soil	Grab						X			X													
JPL5-H4(1)	249992	9	1/5/2007	1340	Soil	Grab						X			X													
JPL5-H5(1)	249992	10	1/5/2007	1400	Soil	Grab						X			X													
JPL5-B5(1)	250003	1	1/2/2007	1045	Soil	Grab																						X
JPL5-D4(1)	250003	2	1/2/2007	1240	Soil	Grab																						X
JPL5-I1(1)	250005	1	1/8/2007	1000	Soil	Grab						X																
JPL5-I2(1)	250005	2	1/8/2007	1020	Soil	Grab						X																
JPL5-I3(1)	250005	3	1/8/2007	1040	Soil	Grab						X																
JPL5-I4(1)	250005	4	1/8/2007	1100	Soil	Grab						X																
JPL5-I5(1)	250005	5	1/8/2007	1120	Soil	Grab						X																
JPL5-J1(1)	250005	6	1/8/2007	1140	Soil	Grab						X																
JPL5-J2(1)	250005	7	1/8/2007	1200	Soil	Grab						X																
JPL5-J3(1)	250005	8	1/8/2007	1220	Soil	Grab						X																
JPL5-J4(1)	250005	9	1/8/2007	1240	Soil	Grab						X																
JPL5-J5(1)	250005	10	1/8/2007	1300	Soil	Grab						X																
JPL5-K1(1)	250012	1	1/9/2007	1000	Soil	Grab						X																
JPL5-K2(1)	250012	2	1/9/2007	1020	Soil	Grab						X																
JPL5-K3(1)	250012	3	1/9/2007	1040	Soil	Grab						X																
JPL5-K4(1)	250012	4	1/9/2007	1100	Soil	Grab						X																
JPL5-K5(1)	250012	5	1/9/2007	1120	Soil	Grab						X																
JPL5-L1(1)	250012	6	1/9/2007	1140	Soil	Grab	X					X																
JPL5-L2(1)	250012	7	1/9/2007	1200	Soil	Grab	X					X			X													
JPL5-L3(1)	250012	8	1/9/2007	1220	Soil	Grab	X					X																
JPL5-L4(1)	250012	9	1/9/2007	1240	Soil	Grab	X					X			X													
JPL5-L5(1)	250012	10	1/9/2007	1300	Soil	Grab	X					X			X													
JPM12-HUMP2(1)	250023	1	1/10/2007	1005	Soil	Grab																						X
JPM12-HUMP8(1)	250023	2	1/10/2007	1035	Soil	Grab																						X

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM12-HUMP9(1)	250023	3	1/10/2007	1040	Soil	Grab																					X
JPM3-ITFAF250(3)	250056	1	12/27/2006	1330	Soil	Grab																					X
JPM3-ITFAF252(3)	250056	2	12/27/2006	1340	Soil	Grab																					X
JPM3-ITFAF253(3)	250056	3	12/27/2006	1345	Soil	Grab																					X
JPM3-ITFAF254(3)	250056	4	12/27/2006	1350	Soil	Grab																					X
JPL3-CP1(1)	250104	1	1/12/2007	900	Soil	Grab																					X
JPL3-CP2(1)	250104	2	1/12/2007	905	Soil	Grab																					X
JPL3-CP5(1)	250104	3	1/12/2007	920	Soil	Grab																					X
JPL3-CP19(1)	250104	4	1/12/2007	1030	Soil	Grab																					X
JPL5-A1(1)	250108	1	1/2/2007	1000	Soil	Composite		X						X													
JPL5-A2(1)	250108	2	1/2/2007	1005	Soil	Composite		X						X													
JPL5-A3(1)	250108	3	1/2/2007	1010	Soil	Composite		X						X													
JPL5-A(41)	250108	4	1/2/2007	1015	Soil	Composite		X						X													
JPL5-A5(1)	250108	5	1/2/2007	1020	Soil	Composite		X						X													
JPL5-B1(1)	250108	6	1/2/2007	1025	Soil	Composite		X						X													
JPL5-B2(1)	250108	7	1/2/2007	1030	Soil	Composite		X						X													
JPL5-B3(1)	250108	8	1/2/2007	1035	Soil	Composite		X						X													
JPL5-B4(1)	250108	9	1/2/2007	1040	Soil	Composite		X						X													
JPL5-B5(1)	250108	10	1/2/2007	1045	Soil	Composite		X						X													
JPM12-AF12(2)	250164	1	1/30/2007	1000	Soil	Composite								X													
JPM12-AP86(1)	250164	2	1/30/2007	1005	Soil	Composite								X													
JPM12-AP87(1)	250164	3	1/30/2007	1010	Soil	Composite								X													
JPM12-AP88(1)	250164	4	1/30/2007	1015	Soil	Composite								X													
JPM3-ITF-AP255(2)	250165	1	1/30/2007	1100	Soil	Grab	X	X						X	X			X					X	X	X		
JPM3-ITF-AP256(2)	250165	2	1/30/2007	1105	Soil	Grab	X	X						X	X			X					X	X	X		
JPM3-ITF-AP257(2)	250165	3	1/30/2007	1110	Soil	Grab		X																			
JPM3-ITF-AP258(2)	250165	4	1/30/2007	1115	Soil	Grab		X																			
JPM3-ITF-AF259(2)	250183	1	2/1/2007	900	Soil	Grab		X						X													X
JPM3-ITF-AF260(2)	250183	2	2/1/2007	905	Soil	Grab		X						X													X
JPM3-ITF-AP100(1)	250183	3	2/1/2007	910	Soil	Grab		X																			
JPM3-ITF-A101(1)	250183	4	2/1/2007	915	Soil	Grab		X																			
JPM3-ITF-A102(1)	250183	5	2/1/2007	1300	Soil	Grab		X																			
JPM3-ITF-AP86(1)	250192	1	1/30/2007	1005	Soil	Grab																					X
JPM3-ITF-AP103(1)	250195	1	2/2/2007	1000	Soil	Grab		X																			
JPM3-ITF-AF378(1)	250224	1	2/9/2007	900	Soil	Grab									X	X			X								
JPM3-ITF-AF97B(1)	250224	2	2/9/2007	905	Soil	Grab				X	X								X								

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM3-ITF-AF49B(1)	250224	3	2/9/2007	910	Soil	Grab	X								X	X							X	X	X		
JPM3-ITF-AF208B(1)	250224	4	2/9/2007	915	Soil	Grab				X	X						X		X								
JPM3-ITF-AF209B(1)	250224	5	2/9/2007	920	Soil	Grab				X	X						X		X								
JPM3-ITF-AF205B(1)	250224	6	2/9/2007	925	Soil	Grab									X		X	X						X	X		
JPM3-ITF-AF215B(1)	250224	7	2/9/2007	930	Soil	Grab									X		X	X						X	X		
JPM3-ITF-AF227B(1)	250224	8	2/9/2007	935	Soil	Grab	X																	X	X		
JPL2-AP35(1)	250253	1	2/21/2007	900	Soil	Grab	X																				
JPL2-AF29(2)	250253	2	2/21/2007	905	Soil	Grab	X																				
JPL2-AP36(0.5)	250253	3	2/21/2007	910	Soil	Grab	X																				
JPL2-AP37(0.5)	250253	4	2/21/2007	915	Soil	Grab	X																				
JPL2-AP38(0.5)	250253	5	2/21/2007	920	Soil	Grab	X																				
JPL2-AP39(0.5)	250253	6	2/21/2007	925	Soil	Grab	X																				
JPL2-AF30(1)	250253	7	2/21/2007	930	Soil	Grab	X																				
JPL2-AP40(0.5)	250253	8	2/21/2007	935	Soil	Grab	X																				
JPL2-AP41(0.5)	250253	9	2/21/2007	940	Soil	Grab	X																				
JPL2-AP42(0.5)	250253	10	2/21/2007	945	Soil	Grab	X																				
JPL2-AP43(0.5)	250253	11	2/21/2007	950	Soil	Grab	X																				
JPL2-AF31(1)	250253	12	2/21/2007	955	Soil	Grab	X																				
JPL2-AP45(0.5)	250253	13	2/21/2007	1005	Soil	Grab	X																				
JPL2-AP46(0.5)	250253	14	2/21/2007	1010	Soil	Grab	X																				
JPL2-AP47(0.5)	250253	15	2/21/2007	1015	Soil	Grab	X																				
JPL2-AF32(1)	250253	16	2/21/2007	1020	Soil	Grab	X																				
JPL2-AP48(0.5)	250253	17	2/21/2007	1025	Soil	Grab	X																				
JPL2-AP49(0.5)	250253	18	2/21/2007	1030	Soil	Grab	X																				
JPL2-AP51(0.5)	250253	19	2/21/2007	1045	Soil	Grab	X																				
JPL2-AF33(1)	250253	20	2/21/2007	1050	Soil	Grab	X																				
JPL2-CP61(2)	250253	21	2/21/2007	1055	Soil	Grab	X																				
JPL2-CP62(2)	250253	22	2/21/2007	1100	Soil	Grab	X																				
JPL2-CP63(2)	250253	23	2/21/2007	1105	Soil	Grab	X																				
JPL2-CP64(2)	250253	24	2/21/2007	1110	Soil	Grab	X																				
JPL2-CP65(2)	250253	25	2/21/2007	1115	Soil	Grab	X																				
JPL2-CP66(2)	250253	26	2/21/2007	1120	Soil	Grab	X																				
JPL2-CP67(2)	250253	27	2/21/2007	1120	Soil	Grab	X																				
JPL2-CP68(2)	250253	28	2/21/2007	1130	Soil	Grab	X																				
JPL2-CP69(8)	250253	29	2/21/2007	1135	Soil	Grab	X																				
JPL2-CP70(8)	250253	30	2/21/2007	1140	Soil	Grab	X																				

TCLP - Toxicity Characteristic Leaching Procedure
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PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)	
JPL2-CP71(8)	250253	31	2/21/2007	1145	Soil	Grab	X																					
JPL2-CP72(8)	250253	32	2/21/2007	1150	Soil	Grab	X																					
JPL2-AP52(0.5)	250253	33	2/21/2007	1155	Soil	Grab	X																					
JPL2-AP22(1)	250262	1	2/15/2007	1420	Soil	Grab	X																					
JPL2-AP23(1)	250262	2	2/15/2007	1425	Soil	Grab	X																					
JPL2-AF19(2)	250262	3	2/15/2007	1400	Soil	Grab	X																					
JPL2-AF20(2)	250262	4	2/15/2007	1405	Soil	Grab	X																					
JPL2-AF25(2)	250262	5	2/19/2007	930	Soil	Grab	X																					
JPL2-AP34(1)	250262	6	2/19/2007	1235	Soil	Grab	X																					
JPL2-AF28(2)	250262	7	2/20/2007	1240	Soil	Grab	X																					
JPL2-AP53(1)	250263	1	2/22/2007	1230	Soil	Grab									X	X	X		X	X			X					
JPL2-AP54(1)	250263	2	2/22/2007	1235	Soil	Grab									X	X	X		X	X			X					
JPL2-AP55(1)	250263	3	2/22/2007	1240	Soil	Grab									X	X	X		X	X			X				X	
JPL2-AF34(2)	250263	4	2/22/2007	1245	Soil	Grab									X	X	X		X	X			X					
JPL2-AF35(2)	250263	5	2/22/2007	1250	Soil	Grab									X	X	X		X	X			X					
JPL2-AF36(2)	250263	6	2/22/2007	1255	Soil	Grab									X	X	X		X	X			X					
JPL2-CP73(0.5)	250274	1	2/23/2007	800	Soil	Grab	X																					
JPL2-CP74(0.5)	250274	2	2/23/2007	805	Soil	Grab	X																					
JPL2-CP75(0.5)	250274	3	2/23/2007	810	Soil	Grab	X																					
JPL2-CP76(0.5)	250274	4	2/23/2007	815	Soil	Grab	X																					
JPL2-CP77(0.5)	250274	5	2/23/2007	820	Soil	Grab	X																					
JPL2-CP78(0.5)	250274	6	2/23/2007	825	Soil	Grab	X																					
JPL2-CP79(0.5)	250274	7	2/23/2007	830	Soil	Grab	X																					
JPL2-CP80(0.5)	250274	8	2/23/2007	835	Soil	Grab	X																					
JPL2-CP81(0.5)	250274	9	2/23/2007	840	Soil	Grab	X																					
JPL2-CP82(0.5)	250274	10	2/23/2007	845	Soil	Grab	X																					
JPL2-CP83(0.5)	250274	11	2/23/2007	850	Soil	Grab	X																					
JPL2-CP85(0.5)	250274	12	2/23/2007	900	Soil	Grab	X																					
JPL2-CP87(0.5)	250274	13	2/23/2007	910	Soil	Grab	X																					
JPL2-CP88(0.5)	250274	14	2/23/2007	915	Soil	Grab	X																					
JPL2-CP89(0.5)	250274	15	2/23/2007	920	Soil	Grab	X																					
JPL2-CP92(0.5)	250274	16	2/23/2007	935	Soil	Grab	X																					
JPL2-AP37(0.5)	250286	1	2/21/2007	915	Soil	Grab	X																					
JPL2-AP56(0.5)	250285	1	2/26/2007	1030	Soil	Grab	X																					
JPL2-AP57(0.5)	250285	2	2/26/2007	1035	Soil	Grab	X																					
JPL2-AP58(0.5)	250285	3	2/26/2007	1040	Soil	Grab	X																					

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)	
JPL2-AP59(0.5)	250285	4	2/26/2007	1045	Soil	Grab	X																					
JPL2-AP61(0.5)	250285	5	2/26/2007	1055	Soil	Grab	X																					
JPL2-AF37(2)	250285	6	2/26/2007	1100	Soil	Grab	X																					
JPL2-AF38(2)	250285	7	2/26/2007	1105	Soil	Grab	X																					
JPL2-AP62(0.5)	250285	8	2/26/2007	1110	Soil	Grab	X																					
JPL2-AP63(0.5)	250285	9	2/26/2007	1115	Soil	Grab	X																					
JPL2-AP64(0.5)	250285	10	2/26/2007	1120	Soil	Grab	X																					
JPL2-AP65(0.5)	250285	11	2/26/2007	1125	Soil	Grab	X																					
JPL2-AF39(2)	250285	12	2/26/2007	1130	Soil	Grab	X																					
JPL2-AP66(0.5)	250285	13	2/26/2007	1035	Soil	Grab	X																					
JPL2-AP67(0.5)	250285	14	2/26/2007	1040	Soil	Grab	X																					
JPL2-AP68(0.5)	250285	15	2/26/2007	1045	Soil	Grab	X																					
JPL2-AF40(2)	250285	16	2/26/2007	1155	Soil	Grab	X																					
JPL2-AP70(0.5)	250293	1	2/27/2007	730	Soil	Grab	X																					
JPL2-AP71(0.5)	250293	2	2/27/2007	735	Soil	Grab	X																					
JPL2-AP72(0.5)	250293	3	2/27/2007	1030	Soil	Grab	X																					
JPL2-AP73(0.5)	250293	4	2/27/2007	1035	Soil	Grab	X																					
JPL2-AP74(0.5)	250293	5	2/27/2007	1040	Soil	Grab	X																					
JPL2-AP73-D(0.5)	250293	6	2/27/2007	1035	Soil	Grab	X																					
JPL2-AP74-D(0.5)	250293	7	2/27/2007	1040	Soil	Grab	X																					
JPL2-AP75(0.5)	250332	1	3/5/2007	1100	Soil	Grab	X																					
JPL2-AF41(2)	250332	2	3/5/2007	1120	Soil	Grab	X																					
JPL2-AP79(0.5)	250332	3	3/5/2007	1125	Soil	Grab	X																					
JPL2-AP80(0.5)	250332	4	3/5/2007	1130	Soil	Grab	X																					
JPL2-AP82(0.5)	250332	5	3/5/2007	1140	Soil	Grab	X																					
JPL2-AF42(2)	250332	6	3/5/2007	1145	Soil	Grab	X																					
JPL2-AP83(0.5)	250332	7	3/5/2007	1150	Soil	Grab	X																					
JPL2-AP84(0.5)	250332	8	3/5/2007	1155	Soil	Grab	X																					
JPL2-AP85(0.5)	250332	9	3/5/2007	1200	Soil	Grab	X																					
JPL2-AP86(0.5)	250332	10	3/5/2007	1205	Soil	Grab	X																					
JPL2-AP87(0.5)	250332	11	3/5/2007	1210	Soil	Grab	X																					
JPL2-AF43(2)	250332	12	3/5/2007	1215	Soil	Grab	X																					
JPL2-AP88(0.5)	250332	13	3/5/2007	1300	Soil	Grab	X																					
JPL2-AP89(0.5)	250332	14	3/5/2007	1305	Soil	Grab	X																					
JPL2-AP90(0.5)	250332	15	3/5/2007	1310	Soil	Grab	X																					
JPL2-AP91(0.5)	250340	1	3/6/2007	1200	Soil	Grab	X																					

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CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL2-AP92(0.5)	250340	2	3/6/2007	1205	Soil	Grab	X																				
JPL2-AP93(0.5)	250340	3	3/6/2007	1230	Soil	Grab	X																				
JPL2-TOTALMETAL-(PROFILE)	250373	1	3/12/2007	1030	Soil	Composite									X	X	X		X	X			X				
JPL2-AP94(0.5)	250378	1	3/13/2007	1200	Soil	Grab	X												X								
JPL2-AP95(0.5)	250387	1	3/13/2007	1200	Soil	Grab													X								
JPL2-AP96(0.5)	250387	2	3/13/2007	1205	Soil	Grab													X								
JPL2-AP95-D(0.5)	250387	3	3/13/2007	1200	Soil	Grab													X								
JPL2-AP96-D(0.5)	250387	4	3/13/2007	1205	Soil	Grab													X								
JPL2-AP97(0.5)	250399	1	3/15/2007	1220	Soil	Grab																					
JPL2-AF44(2)	250399	2	3/15/2007	1225	Soil	Grab																					
JPL2-AF45(2)	250399	3	3/15/2007	1230	Soil	Grab																					
JPL2-CPTANK(0.5)	250400	1	3/15/2007	1215	Soil	Grab				X	X																
JPL2-SP1(0)	250401	1	3/15/2007	1200	Soil	Grab	X																				
JPL2-SP2(0)	250401	2	3/15/2007	1215	Soil	Grab	X																				
JPL2-SP3(0)	250401	3	3/15/2007	1210	Soil	Grab	X																				
JPL2-AP98(0.5)	250415	1	3/17/2007	1100	Soil	Grab									X												
JPL2-AP99(0.5)	250415	2	3/17/2007	1105	Soil	Grab									X			X								X	
JPL2-AF46(2)	250415	3	3/17/2007	1110	Soil	Grab									X												
JPL2-AF47(2)	250415	4	3/17/2007	1115	Soil	Grab									X												
JPL2-AF48(2)	250415	5	3/17/2007	1120	Soil	Grab									X												
JPL2-AP98(0.5)-D	250415	6	3/17/2007	1100	Soil	Grab									X												
JPL2-AF47(2)-D	250415	7	3/17/2007	1115	Soil	Grab																					
JPL2-SP4(1)	250418	1	3/20/2007	1100	Soil	Grab	X																				
JPL2-AF49(2)	250418	2	3/20/2007	1105	Soil	Grab									X	X	X		X	X			X				
JPL2-AF50(3)	250418	3	3/20/2007	1110	Soil	Grab											X										
JPL2-AP100(0.5)	250418	4	3/20/2007	1115	Soil	Grab									X	X	X		X	X			X				
JPL2-AP101(0.5)	250429	1	3/26/2007	1300	Soil	Grab													X								
JPL2-AP102(0.5)	250429	2	3/26/2007	1305	Soil	Grab													X								
JPL2-AF51(3)	250429	3	3/26/2007	1310	Soil	Grab									X				X								
JPL2-AP101(0.5)-D	250429	4	3/26/2007	1300	Soil	Grab													X								
JPL2-AF51(3)-D	250429	5	3/26/2007	1310	Soil	Grab									X				X								
JPL2-AP103(0.5)	250431	1	3/27/2007	1200	Soil	Grab									X	X	X		X	X			X				
JPL2-AP104(0.5)	250431	2	3/27/2007	1205	Soil	Grab									X	X	X		X	X			X				
JPL2-AF52(2)	250431	3	3/27/2007	1210	Soil	Grab									X	X	X		X	X			X				
JPL2-AF53(2)	250431	4	3/27/2007	1215	Soil	Grab									X	X	X		X	X			X				
JPL2-AF53(2)-D	250431	5	3/27/2007	1215	Soil	Grab									X	X	X		X	X			X				

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CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL2-AP105(0.5)	250443	1	3/30/2007	845	Soil	Grab									X	X	X	X	X	X		X					
JPL2-AP106(0.5)	250443	2	3/30/2007	850	Soil	Grab									X	X	X	X	X	X		X					
JPL2-AP107(0.5)	250443	3	3/30/2007	855	Soil	Grab									X	X	X	X	X	X		X					
JPL2-AP108(0.5)	250443	4	3/30/2007	915	Soil	Grab									X	X	X	X	X	X		X					
JPL2-AF54(2)	250443	5	3/30/2007	900	Soil	Grab									X	X	X	X	X	X		X					
JPL2-AF55(2)	250443	6	3/30/2007	905	Soil	Grab									X	X	X	X	X	X		X					
JPL2-AF56(2)	250443	7	3/30/2007	910	Soil	Grab									X	X	X	X	X	X		X					
JPL23A-AF1(6)	250472	1	4/5/2007	1000	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP1(1)	250472	2	4/5/2007	1005	Soil	Grab									X	X	X	X	X	X	X	X		X			X
JPL23A-AP2(4)	250472	3	4/5/2007	1010	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP3(1)	250472	4	4/5/2007	1015	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP4(4)	250472	5	4/5/2007	1020	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP2(4)-D	250472	6	4/5/2007	1010	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP3(1)-D	250472	7	4/5/2007	1015	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-WATER	250473	1	4/5/2007	1100	Water	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP5(1)	250479	1	4/6/2007	1100	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP6(4)	250479	2	4/6/2007	1105	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AF2(6)	250479	3	4/6/2007	1110	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AF5(1)-D	250479	4	4/6/2007	1100	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP7(1)	250483	1	4/9/2007	1250	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP8(4)	250483	2	4/9/2007	1255	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP9(1)	250483	3	4/9/2007	1300	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP10(4)	250483	4	4/9/2007	1305	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AF3(6)	250483	5	4/9/2007	1310	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP11(1)	250504	1	4/16/2007	830	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP12(4)	250504	2	4/16/2007	835	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP13(1)	250504	3	4/16/2007	840	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AP14(4)	250504	4	4/16/2007	845	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-AF4(6)	250504	5	4/16/2007	850	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23A-A13(1)-D	250504	6	4/16/2007	840	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23-AP15(1)	250523	1	4/20/2007	1100	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23-AP16(4)	250523	2	4/20/2007	1105	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23-AP17(1)	250523	3	4/20/2007	1110	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23-AP18(4)	250523	4	4/20/2007	1115	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23-AP19(1)	250523	5	4/20/2007	1120	Soil	Grab									X	X	X	X	X	X	X	X		X			
JPL23-AP20(4)	250523	6	4/20/2007	1125	Soil	Grab									X	X	X	X	X	X	X	X		X			

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CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL23-AF5(6)	250523	7	4/20/2007	1130	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23-AF6(6)	250523	8	4/20/2007	1135	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23-AF7(6)	250523	9	4/20/2007	1140	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23-AP17(1)-D	250523	10	4/20/2007	1110	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AP21(1)	250534	1	4/23/2007	1200	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AP22(4)	250534	2	4/23/2007	1205	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AF8(6)	250534	3	4/23/2007	1210	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AF8(6)-D	250534	4	4/23/2007	1210	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AP23(1)	250536	1	4/24/2007	1100	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AP24(4)	250536	2	4/24/2007	1105	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AP25(1)	250536	3	4/24/2007	1110	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AP26(4)	250536	4	4/24/2007	1115	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AP27(1)	250536	5	4/24/2007	1120	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AP28(4)	250536	6	4/24/2007	1125	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AP29(1)	250536	7	4/24/2007	1130	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AP30(4)	250536	8	4/24/2007	1135	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AF9(6)	250536	9	4/24/2007	1140	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23-AP17(1)	250541	1	4/20/2007	1110	Soil	Grab																					X
JPL23-AP17(1)-D	250541	2	4/20/2007	1110	Soil	Grab																					X
JPM12-STOCKPILE-1(0)	250548	1	4/26/2007	1100	Soil	Grab									X												X
JPM12-STOCKPILE-2(0)	250548	2	4/26/2007	1105	Soil	Grab									X												X
JPM12-STOCKPILE-3(0)	250548	3	4/26/2007	1110	Soil	Grab									X												X
JPM12-STOCKPILE-4(0)	250548	4	4/26/2007	1115	Soil	Grab									X												X
JPM12-STOCKPILE-5(0)	250548	5	4/26/2007	1120	Soil	Grab									X												X
JPLS-As(0.5)	250551	1	4/27/2007	1000	Soil	Grab											X										
JPL23A-AP31(1)	250557	1	4/30/2007	1100	Soil	Grab										X											
JPL23A-AF10(1)	250560	1	5/1/2007	700	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AF11(6)	250560	2	5/1/2007	705	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-AF12(6)	250560	3	5/1/2007	710	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPM12-STOCKPILE-1(0)	250548	1	4/26/2007	1100	Soil	Grab										X											
JPM12-STOCKPILE-5(0)	250548	5	4/26/2007	1120	Soil	Grab										X											
JPL23A-SP1(0.5)	250573	1	5/3/2007	1300	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-SP2(0.5)	250573	2	5/3/2007	1305	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-SP3(0.5)	250573	3	5/3/2007	1310	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-SP4(0.5)	250573	4	5/3/2007	1315	Soil	Grab									X	X	X	X	X	X	X	X	X				
JPL23A-SP2(0.5)	250586	1	5/3/2007	1305	Soil	Grab																					X

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL23A-SP4(0.5)	250586	2	5/3/2007	1315	Soil	Grab																					X
JPL2-AP109(0.5)	250595	1	5/10/2007	1130	Soil	Grab									X	X		X			X			X			
JPL2-AP110(0.5)	250595	2	5/10/2007	1135	Soil	Grab									X	X		X			X			X			
JPL2-AP111(0.5)	250595	3	5/10/2007	1140	Soil	Grab									X	X		X			X			X			
JPL2-AF57(2)	250597	1	5/11/2007	900	Soil	Grab									X	X	X	X	X		X		X				
JPL2-AF58(2)	250597	2	5/11/2007	905	Soil	Grab									X	X	X	X	X		X		X				
JPL2-AP112(0.5)	250597	3	5/11/2007	910	Soil	Grab												X									
JPL2-AP113(0.5)	250597	4	5/11/2007	915	Soil	Grab												X									
JPL2-AP114(0.5)	250597	5	5/11/2007	920	Soil	Grab									X	X	X	X	X				X				
JPL2-AF57(2)-D	250597	6	5/11/2007	900	Soil	Grab									X	X	X	X	X				X				
JPL2-AP115(0.5)	250603	1	5/15/2007	730	Soil	Grab									X	X	X	X	X				X				
JPL2-AP116(0.5)	250603	2	5/15/2007	735	Soil	Grab									X	X	X	X	X				X				
JPL2-SP4(0)	250606	1	5/16/2007	1100	Soil	Grab									X	X	X	X	X				X				
JPL2-SP5(0)	250606	2	5/16/2007	1105	Soil	Grab									X	X	X	X	X				X				
JPL2-SP6(0)	250606	3	5/16/2007	1110	Soil	Grab									X	X	X	X	X				X				
JPL2-SP7(0)	250606	4	5/16/2007	1115	Soil	Grab									X	X	X	X	X				X				
JPL2-AP117(0.5)	500-4270	1	5/17/2007	1200	Soil	Grab									X	X	X	X	X				X				
JPL2-AP118(0.5)	500-4270	2	5/17/2007	1205	Soil	Grab									X	X	X	X	X				X				
JPL2-AP119(0.5)	500-4270	3	5/17/2007	1210	Soil	Grab									X	X	X	X	X				X				
JPL2-AP120(0.5)	500-4270	4	5/17/2007	1215	Soil	Grab									X	X	X	X	X				X				
JPL2-PF1(2)	500-4270	5	5/17/2007	1220	Soil	Grab		X							X	X	X	X	X				X				
JPL2-PF2(2)	500-4270	6	5/17/2007	1225	Soil	Grab		X							X	X	X	X	X				X				
JPL2-PF3(2)	500-4270	7	5/17/2007	1230	Soil	Grab		X							X	X	X	X	X				X				
JPL2-AP121(0.5)	500-4287	1	5/18/2007	1030	Soil	Grab									X	X	X	X	X				X				
JPL2-AP122(0.5)	500-4317	1	5/21/2007	700	Soil	Grab									X	X	X	X	X				X				
JPL2-SP8(0.5)	500-4317	2	5/21/2007	1100	Soil	Grab									X	X	X	X	X				X				
JPL2-SP9(0.5)	500-4317	3	5/21/2007	1105	Soil	Grab									X	X	X	X	X				X				
JPL2-AST-TF1(3)	500-4317	4	5/21/2007	1300	Soil	Grab		X		X	X				X	X	X	X	X				X				
JPL2-AST-TF2(4)	500-4317	5	5/21/2007	1305	Soil	Grab		X		X	X				X	X	X	X	X				X				
JPL2-AST-TP1(0.5)	500-4317	6	5/21/2007	1310	Soil	Grab		X		X	X				X	X	X	X	X				X				
JPL2-AST-TP2(0.5)	500-4317	7	5/21/2007	1315	Soil	Grab		X		X	X				X	X	X	X	X				X				
JPL2-AST-TP3(0.5)	500-4317	8	5/21/2007	1320	Soil	Grab		X		X	X				X	X	X	X	X				X				
JPL2-CP93(0.5)	500-4362	1	5/23/2007	1300	Soil	Grab									X												
JPL2-CP94(0.5)	500-4362	2	5/23/2007	1305	Soil	Grab									X												
JPL2-Astliquid	500-4396	1	5/24/2007	1200	Oil	Grab																					
JPL2-AP123(0.5)	500-4427	1	5/29/2007	1100	Soil	Grab									X	X	X	X	X				X				

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL2-AP124(0.5)	500-4427	2	5/29/2007	1105	Soil	Grab									X	X	X		X	X			X				
JPL2-PF4(4)	500-4427	3	5/29/2007	1110	Soil	Grab									X	X	X		X	X			X				
JPL2-PF5(4)	500-4427	4	5/29/2007	1115	Soil	Grab		X		X	X				X	X	X		X	X			X				
JPL2-PF6(4)	500-4427	5	5/29/2007	1120	Soil	Grab		X		X	X				X	X	X		X	X			X				
JPL23A-SP5(1)	500-4447	1	5/30/2007	1100	Soil	Grab									X												
JPL2-AP125(0.5)	500-4472	1	5/31/2007	900	Soil	Grab									X												
JPL2-AP126(0.5)	500-4472	2	5/31/2007	905	Soil	Grab									X												
JPL2-AP127(0.5)	500-4472	3	5/31/2007	915	Soil	Grab									X												
JPL2-AP128(0.5)	500-4472	4	5/31/2007	920	Soil	Grab									X												
JPL2-AF59(2)	500-4472	5	5/31/2007	925	Soil	Grab									X												
JPL2-AF60(2)	500-4472	6	5/31/2007	930	Soil	Grab									X												
JPL2-AF61(2)	500-4472	7	5/31/2007	935	Soil	Grab									X												
JPL2-SP10(1)	500-4472	8	5/31/2007	1005	Soil	Grab									X				X								
JPL2-SP11(1)	500-4472	9	5/31/2007	1010	Soil	Grab									X				X								
JPL2-TP4(1)	500-4472	10	5/31/2007	940	Soil	Grab		X		X	X																
JPL2-TP5(1)	500-4472	11	5/31/2007	945	Soil	Grab		X		X	X																
JPL2-TP6(1)	500-4472	12	5/31/2007	950	Soil	Grab		X		X	X																
JPL2-TF3(5)	500-4472	13	5/31/2007	955	Soil	Grab		X		X	X																
JPL2-TF4(7)	500-4472	14	5/31/2007	1000	Soil	Grab		X		X	X																
JPL2-AP129(1)	500-4561	1	6/6/2007	1000	Soil	Grab									X	X	X		X	X			X				
JPL2-AP130(4)	500-4561	2	6/6/2007	1005	Soil	Grab									X	X	X		X	X			X				
JPL2-AP131(1)	500-4561	3	6/6/2007	1010	Soil	Grab									X	X	X		X	X			X				
JPL2-AP132(4)	500-4561	4	6/6/2007	1015	Soil	Grab									X	X	X		X	X			X				
JPL2-AP133(1)	500-4561	5	6/6/2007	1020	Soil	Grab									X	X	X		X	X			X				
JPL2-AP134(4)	500-4561	6	6/6/2007	1025	Soil	Grab									X	X	X		X	X			X				
JPL2-AP135(1)	500-4561	7	6/6/2007	1030	Soil	Grab									X	X	X		X	X			X				
JPL2-AP136(4)	500-4561	8	6/6/2007	1035	Soil	Grab									X	X	X		X	X			X				
JPL2-AF62(10)	500-4561	9	6/6/2007	1040	Soil	Grab									X	X	X		X	X			X				
JPWR367-2W-1	500-4599	1	6/7/2007	900	Soil	Grab																					
JPWR367-2W-2	500-4599	2	6/7/2007	905	Soil	Composite	X								X												
JPWR367-2W-4	500-4599	3	6/7/2007	910	Soil	Composite	X								X												
JPWR367-2W-5	500-4599	4	6/7/2007	915	Soil	Composite	X								X												
JPWR367-2W-7	500-4599	5	6/7/2007	920	Soil	Composite	X								X												
JPWR367-2W-8	500-4599	6	6/7/2007	925	Soil	Composite	X								X												
JPWR367-2W-10	500-4599	7	6/7/2007	930	Soil	Composite	X								X												
JPWR367-2W-11	500-4599	8	6/7/2007	935	Soil	Composite	X								X												

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPWR367-2W-12	500-4599	9	6/7/2007	940	Soil	Composite	X								X												
JPWR367-2W-14	500-4599	10	6/7/2007	945	Soil	Composite	X								X												
JPWR367-2W-15	500-4599	11	6/7/2007	950	Soil	Composite	X								X												
JPWR367-2W-16	500-4599	12	6/7/2007	955	Soil	Composite	X								X												
JPWR367-2W-4-D	500-4599	13	6/7/2007	910	Soil	Composite	X								X												
JPWR367-2W-8-D	500-4599	14	6/7/2007	925	Soil	Composite	X								X												
JPWR368-2E-1	500-4602	1	6/7/2007	1000	Soil	Composite	X								X												
JPWR368-2E-3	500-4602	2	6/7/2007	1005	Soil	Composite	X								X												
JPWR368-2E-4	500-4602	3	6/7/2007	1010	Soil	Composite	X								X												
JPWR368-2E-6	500-4602	4	6/7/2007	1015	Soil	Composite	X								X												
JPWR368-2E-7	500-4602	5	6/7/2007	1020	Soil	Composite	X								X												
JPWR368-2E-8	500-4602	6	6/7/2007	1025	Soil	Composite	X								X												
JPWR368-2E-9	500-4602	7	6/7/2007	1030	Soil	Composite	X								X												
JPWR368-2E-11	500-4602	8	6/7/2007	1035	Soil	Composite	X								X												
JPWR368-2E-12	500-4602	9	6/7/2007	1040	Soil	Composite	X								X												
JPWR368-2E-13	500-4602	10	6/7/2007	1045	Soil	Composite	X								X												
JPWR368-2E-15	500-4602	11	6/7/2007	1050	Soil	Composite	X								X												
JPWR368-2E-16	500-4602	12	6/7/2007	1055	Soil	Composite	X								X												
JPWR368-2E-9-D	500-4602	13	6/7/2007	1030	Soil	Composite	X								X												
JPWR368-2E-12-D	500-4602	14	6/7/2007	1040	Soil	Composite	X								X												
JPL2-SP12(0.5)	500-4630	1	6/8/2007	1100	Soil	Grab									X	X	X		X	X			X				
JPL2-SP13(0.5)	500-4630	2	6/8/2007	1105	Soil	Grab									X	X	X		X	X			X				
JPL2-SP14(0.5)	500-4630	3	6/8/2007	1110	Soil	Grab									X	X	X		X	X			X				
JPL2-SP15(0.5)	500-4630	4	6/8/2007	1115	Soil	Grab									X	X	X		X	X			X				
JPL2-SP16(0.5)	500-4630	5	6/8/2007	1120	Soil	Grab									X	X	X		X	X			X				
JPWR-369-1W-1	500-4661	1	6/11/2007	900	Soil	Composite	X								X												
JPWR-369-1W-2	500-4661	2	6/11/2007	905	Soil	Composite	X								X												
JPWR-369-1W-3	500-4661	3	6/11/2007	910	Soil	Composite	X								X												
JPWR-369-1W-5	500-4661	4	6/11/2007	915	Soil	Composite	X								X												
JPWR-369-1W-7	500-4661	5	6/11/2007	920	Soil	Composite	X								X												
JPWR-369-1W-8	500-4661	6	6/11/2007	925	Soil	Composite	X								X												
JPWR-369-1W-10	500-4661	7	6/11/2007	930	Soil	Composite	X								X												
JPWR-369-1W-11	500-4661	8	6/11/2007	935	Soil	Composite	X								X												
JPWR-369-1W-12	500-4661	9	6/11/2007	940	Soil	Composite	X								X												
JPWR-369-1W-13	500-4661	10	6/11/2007	945	Soil	Composite	X								X												
JPWR-369-1W-14	500-4661	11	6/11/2007	950	Soil	Composite	X								X												

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TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPWR-369-1W-16	500-4661	12	6/11/2007	955	Soil	Composite	X								X												
JPWR-369-1W-5-D	500-4661	13	6/11/2007	915	Soil	Composite	X								X												
JPWR-369-1W-14-D	500-4661	14	6/11/2007	950	Soil	Composite	X								X												
JPWR370-1E-2	500-4662	1	6/11/2007	1000	Soil	Composite	X								X												
JPWR370-1E-3	500-4662	2	6/11/2007	1005	Soil	Composite	X								X												
JPWR370-1E-5	500-4662	3	6/11/2007	1010	Soil	Composite	X								X												
JPWR370-1E-6	500-4662	4	6/11/2007	1015	Soil	Composite	X								X												
JPWR370-1E-8	500-4662	5	6/11/2007	1020	Soil	Composite	X								X												
JPWR370-1E-9	500-4662	6	6/11/2007	1025	Soil	Composite	X								X												
JPWR370-1E-11	500-4662	7	6/11/2007	1030	Soil	Composite	X								X												
JPWR370-1E-12	500-4662	8	6/11/2007	1035	Soil	Composite	X								X												
JPWR370-1E-13	500-4662	9	6/11/2007	1040	Soil	Composite	X								X												
JPWR370-1E-14	500-4662	10	6/11/2007	1045	Soil	Composite	X								X												
JPWR370-1E-15	500-4662	11	6/11/2007	1050	Soil	Composite	X								X												
JPWR370-1E-16	500-4662	12	6/11/2007	1055	Soil	Composite	X								X												
JPWR370-1E-13-D	500-4662	13	6/11/2007	1040	Soil	Composite	X								X												
JPWR370-1E-15-D	500-4662	14	6/11/2007	1050	Soil	Composite	X								X												
JPL5-AP1(0.5)	500-4685	1	6/12/2007	1100	Soil	Grab									X	X			X								
JPL5-AP2(0.5)	500-4685	2	6/12/2007	1105	Soil	Grab									X	X			X								
JPL5-AP3(0.5)	500-4685	3	6/12/2007	1110	Soil	Grab									X	X			X								
JPL5-AP4(0.5)	500-4685	4	6/12/2007	1115	Soil	Grab									X	X			X								
JPL5-AF1(1)	500-4685	5	6/12/2007	1120	Soil	Grab									X	X			X								
JPL5-AF2(1)	500-4685	6	6/12/2007	1125	Soil	Grab									X	X			X								
JPL5-AF3(1)	500-4685	7	6/12/2007	1130	Soil	Grab									X	X			X								
JPL5-AF3(1)-D	500-4685	8	6/12/2007	1130	Soil	Grab									X	X			X								
JPL5-AP1-(0.5)	500-4792	1	6/18/2007	1200	Soil	Grab						X			X												
JPL5-AP2-(0.5)	500-4792	2	6/18/2007	1205	Soil	Grab						X			X												
JPL5-AP3-(0.5)	500-4792	3	6/18/2007	1210	Soil	Grab						X			X												
JPL5-AP4-(0.5)	500-4792	4	6/18/2007	1215	Soil	Grab						X			X												
JPL5-AF1-(3)	500-4792	5	6/18/2007	1220	Soil	Grab						X			X												
JPL5-AF2-(3)	500-4792	6	6/18/2007	1225	Soil	Grab						X			X												
JPL5-AF3-(3)	500-4792	7	6/18/2007	1230	Soil	Grab						X			X												
JPL5-AF4-(3)	500-4792	8	6/18/2007	1235	Soil	Grab						X			X												
JPM4-AF4(1)	500-4814	1	6/19/2007	900	Soil	Grab									X												
JPM4-AF5(1)	500-4814	2	6/19/2007	905	Soil	Grab									X												
JPM4-AF6(1)	500-4814	3	6/19/2007	910	Soil	Grab									X												

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM4-AP4(0.5)	500-4814	4	6/19/2007	915	Soil	Grab									X												
JPM4-AP5(0.5)	500-4814	5	6/19/2007	920	Soil	Grab									X												
JPM4-AP6(0.5)	500-4814	6	6/19/2007	925	Soil	Grab									X												
JPM4-AP7(0.5)	500-4814	7	6/19/2007	930	Soil	Grab									X												
JPL5-AF5(3)	500-4870	1	6/21/2007	1200	Soil	Grab									X												
JPL5-AF6(3)	500-4870	2	6/21/2007	1205	Soil	Grab									X												
JPL5-AF7(3)	500-4870	3	6/21/2007	1210	Soil	Grab									X												
JPL5-AF8(3)	500-4870	4	6/21/2007	1215	Soil	Grab									X												
JPL5-AP5(0.5)	500-4870	5	6/21/2007	1220	Soil	Grab									X												
JPL5-AP6(0.5)	500-4870	6	6/21/2007	1225	Soil	Grab									X												
JPL5-AP7(0.5)	500-4870	7	6/21/2007	1230	Soil	Grab									X												
JPL5-AP8(0.5)	500-4870	8	6/21/2007	1235	Soil	Grab									X												
JPL5-AP9(0.5)	500-4870	9	6/21/2007	1240	Soil	Grab									X												
JPL5-AP9(0.5)-D	500-4870	10	6/21/2007	1240	Soil	Grab									X												
JPL5-1(3)	500-4954	1	6/22/2007	1000	Soil	Composite					X				X												
JPL5-2(3)	500-4954	2	6/22/2007	1005	Soil	Composite					X				X												
JPL5-3(3)	500-4954	3	6/22/2007	1010	Soil	Composite					X				X												
JPL5-4(3)	500-4954	4	6/22/2007	1015	Soil	Composite					X				X												
JPL5-5(3)	500-4954	5	6/22/2007	1020	Soil	Composite					X				X												
JPL5-6(3)	500-4954	6	6/22/2007	1025	Soil	Composite					X				X												
JPL5-7(3)	500-4954	7	6/22/2007	1030	Soil	Composite					X				X												
JPL5-8(3)	500-4954	8	6/22/2007	1035	Soil	Composite					X				X												
JPL5-9(3)	500-4954	9	6/22/2007	1040	Soil	Composite					X				X												
JPL5-10(3)	500-4954	10	6/22/2007	1045	Soil	Composite					X				X												
JPL5-11(3)	500-4954	11	6/22/2007	1050	Soil	Composite					X				X												
JPL5-12(3)	500-4954	12	6/22/2007	1055	Soil	Composite					X				X												
JPL5-13(D)	500-4954	13	6/22/2007	1100	Soil	Composite					X				X												
JPL5-10-D(3)	500-4954	14	6/22/2007	1045	Soil	Composite					X				X												
JPL3-Barrel-White Substance	500-5055	1	7/2/2007	1200	Soil	Grab									X								X				X
JPM4-AF7(1)	500-5122	1	7/9/2007	1200	Soil	Grab									X												X
JPM4-AP11(0.5)	500-5122	2	7/9/2007	1205	Soil	Grab									X												X
JPM4-AP12(0.5)	500-5122	3	7/9/2007	1210	Soil	Grab									X												X
JPM4-AP13(0.5)	500-5122	4	7/9/2007	1215	Soil	Grab									X												X
JPM4-AP14(0.5)	500-5122	5	7/9/2007	1220	Soil	Grab									X												X
JPL5-PCN-1(3)	500-5265	1	7/13/2007	1000	Soil	Composite		X			X				X	X	X	X							X		
JPL5-PCN-2(3)	500-5265	2	7/13/2007	1005	Soil	Composite		X			X				X	X	X	X							X		

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
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PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL5-PCN-3(3)	500-5265	3	7/13/2007	1010	Soil	Composite		X				X		X	X	X	X								X		
JPL5-PCN-4(3)	500-5265	4	7/13/2007	1015	Soil	Composite		X				X		X	X	X	X								X		
JPL5-PCN-5(3)	500-5265	5	7/13/2007	1020	Soil	Composite		X				X		X	X	X	X								X		
JPL5-PCN-6(3)	500-5265	6	7/13/2007	1025	Soil	Composite		X				X		X	X	X	X								X		
JPL5-PCN-7(3)	500-5265	7	7/13/2007	1030	Soil	Composite		X				X		X	X	X	X								X		
JPL5-PCN-8(3)	500-5265	8	7/13/2007	1035	Soil	Composite		X				X		X	X	X	X								X		
JPL5-PCN-9(3)	500-5265	9	7/13/2007	1040	Soil	Composite		X				X		X	X	X	X								X		
JPL5-PCN-10(3)	500-5265	10	7/13/2007	1045	Soil	Composite		X				X		X	X	X	X								X		
JPL5-PCN-11(3)	500-5285	1	7/16/2007	900	Soil	Composite		X						X													
JPL5-PCN-12(3)	500-5285	2	7/16/2007	905	Soil	Composite		X						X													
JPL5-PCN-13(3)	500-5285	3	7/16/2007	910	Soil	Composite		X						X													
JPL5-PCN-14(3)	500-5285	4	7/16/2007	915	Soil	Composite		X						X													
JPL5-PCN-15(3)	500-5285	5	7/16/2007	920	Soil	Composite		X						X													
JPL5-PCN-16(3)	500-5285	6	7/16/2007	925	Soil	Composite		X						X													
JPL5-PCN-17(3)	500-5285	7	7/16/2007	930	Soil	Composite		X						X													
JPL5-PCN-18(3)	500-5285	8	7/16/2007	935	Soil	Composite		X						X													
JPL5-PCN-19(3)	500-5285	9	7/16/2007	940	Soil	Composite		X						X													
JPL5-PCN-20(3)	500-5285	10	7/16/2007	945	Soil	Composite		X						X													
JPL5-PCN-21(3)	500-5285	11	7/16/2007	950	Soil	Composite		X						X													
JPL5-PCN-22(3)	500-5285	12	7/16/2007	955	Soil	Composite		X						X													
JPL5-PCN-23(3)	500-5285	13	7/16/2007	1000	Soil	Composite		X						X													
JPL5-PCN-24(3)	500-5285	14	7/16/2007	1005	Soil	Composite		X						X													
JPL5-PCN-25(3)	500-5285	15	7/16/2007	1010	Soil	Composite		X						X													
JPM4-AP15(0.5)	500-5286	1	7/16/2007	1200	Soil	Grab								X												X	
JPM4-AP16(0.5)	500-5286	2	7/16/2007	1205	Soil	Grab								X												X	
JPM4-AP17(0.5)	500-5286	3	7/16/2007	1210	Soil	Grab								X												X	
JPM4-AP18(0.5)	500-5286	4	7/16/2007	1215	Soil	Grab								X												X	
JPM4-AP19(0.5)	500-5286	5	7/16/2007	1220	Soil	Grab								X												X	
JPM4-AP20(0.5)	500-5286	6	7/16/2007	1225	Soil	Grab								X												X	
JPL5-14(3)	500-5306	1	7/17/2007	900	Soil	Composite						X		X													
JPL5-15(0)	500-5306	2	7/17/2007	905	Soil	Composite						X		X													
JPL3-Ditch-1(0)	500-5347	1	7/18/2007	1000	Soil	Grab											X										
JPL3-Ditch-2(0)	500-5347	2	7/18/2007	1005	Soil	Grab											X										
JPL3-Ditch-3(0)	500-5347	3	7/18/2007	1010	Soil	Grab											X										
JPL3-Ditch-4(0)	500-5347	4	7/18/2007	1015	Soil	Grab											X										
JPL3-Barrel-White Substance	500-5352	1	7/2/2007	1200	Soil	Grab								X													

TCLP - Toxicity Characteristic Leaching Procedure
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CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL2-Stormwater-US#5	500-5427	1	7/19/2007	1000	Water	Grab	X								X	X	X	X	X	X		X					
JPL3-Stormwater-US#5	500-5427	2	7/19/2007	1005	Water	Grab	X								X	X	X	X	X	X		X					
JPL5-AP34(0.5)	500-5501	1	7/23/2007	1100	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AP35(0.5)	500-5501	2	7/23/2007	1105	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AP36(0.5)	500-5501	3	7/23/2007	1110	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF9(3)	500-5501	4	7/23/2007	1115	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF10(3)	500-5501	5	7/23/2007	1120	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF11(3)	500-5501	6	7/23/2007	1125	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF12(3)	500-5501	7	7/23/2007	1130	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF13(3)	500-5501	8	7/23/2007	1135	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF14(3)	500-5501	9	7/23/2007	1140	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF15(3)	500-5501	10	7/23/2007	1145	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF16(3)	500-5501	11	7/23/2007	1150	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF17(3)	500-5501	12	7/23/2007	1155	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF18(3)	500-5501	13	7/23/2007	1200	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF19(3)	500-5501	14	7/23/2007	1205	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF20(3)	500-5501	15	7/23/2007	1210	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF21(3)	500-5501	16	7/23/2007	1215	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF20(3)-D	500-5501	17	7/23/2007	1210	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL5-AF21(3)-D	500-5501	18	7/23/2007	1215	Soil	Grab					X				X	X	X	X	X	X		X	X	X			
JPL3-Ditch-1(0)	500-5529	1	7/18/2007	1000	Soil	Grab																				X	
JPL3-GENFILL	500-5635	1	7/30/2007	1400	Soil	Grab	X					X	X														
JPL3-Topsoil	500-5635	2	7/30/2007	1405	Soil	Grab	X					X	X														
JPM4-AF8(4)	500-5658	1	7/31/2007	1100	Soil	Grab									X												X
JPM4-AF9(4)	500-5658	2	7/31/2007	1105	Soil	Grab									X												X
JPM4-AF10(4)	500-5658	3	7/31/2007	1110	Soil	Grab									X												X
JPL3-Blast Pit (2)	500-5681	1	8/1/2007	910	Soil	Grab	X								X	X	X	X	X	X		X					
JPM4-SB-1-RAW-8/2	500-5718	1	8/2/2007	1100	Water	Grab	X								X												
JPL3-STOCKPILE-1(0)	500-5719	1	8/2/2007	1000	Soil	Grab	X								X	X	X	X	X	X		X	X				
JPL3-STOCKPILE-2(0)	500-5719	2	8/2/2007	1005	Soil	Grab	X								X	X	X	X	X	X		X	X				
JPM4-Sediment-8/2	500-5720	1	8/2/2007	1105	Sediment	Composite	X								X												
JPM4-AP21(0.5)	500-5767	1	8/3/2007	1000	Soil	Grab									X												X
JPM4-AP22(2)	500-5767	2	8/3/2007	1005	Soil	Grab									X												X
JPM4-AP23(0.5)	500-5767	3	8/3/2007	1010	Soil	Grab									X												X
JPM4-AP24(2)	500-5767	4	8/3/2007	1015	Soil	Grab									X												X
JPM4-AP25(0.5)	500-5767	5	8/3/2007	1020	Soil	Grab									X												X

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CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM4-AP26(2)	500-5767	6	8/3/2007	1025	Soil	Grab									X											X	
JPM4-AP27(0.5)	500-5767	7	8/3/2007	1030	Soil	Grab									X											X	
JPM4-AP28(2)	500-5767	8	8/3/2007	1035	Soil	Grab									X											X	
JPM4-AP29(0.5)	500-5767	9	8/3/2007	1040	Soil	Grab									X											X	
JPM4-AP30(2)	500-5767	10	8/3/2007	1045	Soil	Grab									X											X	
JPM4-AP31(0.5)	500-5767	11	8/3/2007	1050	Soil	Grab									X											X	
JPM4-AP30(2)-D	500-5767	12	8/3/2007	1045	Soil	Grab									X											X	
JPL5-PCN2-1(5)	500-5933	1	8/10/2007	800	Soil	Composite		X		X				X	X	X		X							X		
JPL5-PCN2-2(5)	500-5933	2	8/10/2007	805	Soil	Composite		X		X				X	X	X		X							X		
JPL5-PCN2-3(5)	500-5933	3	8/10/2007	810	Soil	Composite		X		X				X	X	X		X							X		
JPL5-PCN2-4(5)	500-5933	4	8/10/2007	815	Soil	Composite		X		X				X	X	X		X							X		
JPL5-PCN2-5(5)	500-5933	5	8/10/2007	820	Soil	Composite		X		X				X	X	X		X							X		
JPL5-PCN2-6(5)	500-5933	6	8/10/2007	825	Soil	Composite		X		X				X	X	X		X							X		
JPL5-PCN2-7(5)	500-5933	7	8/10/2007	830	Soil	Composite		X		X				X	X	X		X							X		
JPL5-PCN2-8(5)	500-5933	8	8/10/2007	835	Soil	Composite		X		X				X	X	X		X							X		
JPL5-PCN2-9(5)	500-5933	9	8/10/2007	840	Soil	Composite		X		X				X	X	X		X							X		
JPL5-PCN2-10(5)	500-5933	10	8/10/2007	845	Soil	Composite		X		X				X	X	X		X							X		
JPL5-PCN2-11(5)	500-5954	1	8/13/2007	900	Soil	Composite		X						X													
JPL5-PCN2-12(5)	500-5954	2	8/13/2007	905	Soil	Composite		X						X													
JPL5-PCN2-13(5)	500-5954	3	8/13/2007	910	Soil	Composite		X						X													
JPL5-PCN2-14(5)	500-5954	4	8/13/2007	915	Soil	Composite		X						X													
JPL5-PCN2-15(5)	500-5954	5	8/13/2007	920	Soil	Composite		X						X													
JPL5-PCN2-16(5)	500-5954	6	8/13/2007	925	Soil	Composite		X						X													
JPL5-PCN2-17(5)	500-5954	7	8/13/2007	930	Soil	Composite		X						X													
JPL5-PCN2-18(5)	500-5954	8	8/13/2007	935	Soil	Composite		X						X													
JPL5-PCN2-19(5)	500-5954	9	8/13/2007	940	Soil	Composite		X						X													
JPL5-PCN2-20(5)	500-5954	10	8/13/2007	945	Soil	Composite		X						X													
JPL5-PCN2-21(5)	500-5954	11	8/13/2007	950	Soil	Composite		X						X													
JPL5-PCN2-22(5)	500-5954	12	8/13/2007	955	Soil	Composite		X						X													
JPL5-PCN2-23(5)	500-5954	13	8/13/2007	1000	Soil	Composite		X						X													
JPL5-PCN2-24(5)	500-5954	14	8/13/2007	1005	Soil	Composite		X						X													
JPL5-PCN2-25(5)	500-5954	15	8/13/2007	1010	Soil	Composite		X						X													
JPL5-PCN2-26(5)	500-5954	16	8/13/2007	1015	Soil	Composite		X						X													
JPL5-PCN2-27(5)	500-5954	17	8/13/2007	1020	Soil	Composite		X						X													
JPM4-AP26(2)	500-5974	1	8/3/2007	1025	Soil	Grab																				X	
JPM4-AP28(2)	500-5974	2	8/3/2007	1035	Soil	Grab																				X	

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DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPM4-AP32(0.5)	500-5975	1	8/14/2007	900	Soil	Grab									X												
JPM4-AP33(0.5)	500-5975	2	8/14/2007	905	Soil	Grab									X												
JPM4-AP34(0.5)	500-5975	3	8/14/2007	910	Soil	Grab									X												
JPM4-AP35(0.5)	500-5975	4	8/14/2007	915	Soil	Grab									X												
JPM4-AP36(0.5)	500-5975	5	8/14/2007	920	Soil	Grab									X												
JPM4-AP37(0.5)	500-5975	6	8/14/2007	925	Soil	Grab									X												
JPM4-AP38(0.5)	500-5975	7	8/14/2007	930	Soil	Grab									X												
JPM4-AP39(0.5)	500-5975	8	8/14/2007	935	Soil	Grab									X												
JPM4-AP40(0.5)	500-5975	9	8/14/2007	940	Soil	Grab									X												
JPM4-AP41(0.5)	500-5975	10	8/14/2007	945	Soil	Grab									X												
JPM4-AP42(0.5)	500-5975	11	8/14/2007	950	Soil	Grab									X												
JPM4-AP43(0.5)	500-5975	12	8/14/2007	955	Soil	Grab									X												
JPM4-AP44(0.5)	500-5975	13	8/14/2007	1000	Soil	Grab									X												
JPM4-AP45(0.5)	500-5975	14	8/14/2007	1005	Soil	Grab									X												
JPM4-AP46(0.5)	500-5975	15	8/14/2007	1010	Soil	Grab									X												
JPM4-AP47(0.5)	500-5975	16	8/14/2007	1015	Soil	Grab									X												
JPM4-AP48(0.5)	500-5975	17	8/14/2007	1020	Soil	Grab									X												
JPM4-AP49(0.5)	500-5975	18	8/14/2007	1025	Soil	Grab									X												
JPL5-AP1(0.5)	500-6015	1	8/15/2007	900	Soil	Grab									X												X
JPL5-AP37(0.5)	500-6017	1	8/15/2007	1000	Soil	Grab									X												
JPL5-AP38(0.5)	500-6017	2	8/15/2007	1005	Soil	Grab									X												
JPL5-AP39(0.5)	500-6017	3	8/15/2007	1010	Soil	Grab									X												
JPL5-AP40(0.5)	500-6017	4	8/15/2007	1015	Soil	Grab									X												
JPL5-AF22(2)	500-6017	5	8/15/2007	1020	Soil	Grab									X												
JPL5-AF23(2)	500-6017	6	8/15/2007	1025	Soil	Grab									X												
JPL5-AF24(4)	500-6018	1	8/15/2007	1030	Soil	Grab											X										
JPL5-AF25(4)	500-6018	2	8/15/2007	1035	Soil	Grab											X										
JPL5-AF26(4)	500-6018	3	8/15/2007	1040	Soil	Grab											X										
JPM4-AP32(0.5)	500-6053	1	8/14/2007	900	Soil	Grab																					X
JPM4-AP39(0.5)	500-6053	2	8/14/2007	935	Soil	Grab																					X
JPM4-AP42(0.5)	500-6053	3	8/14/2007	950	Soil	Grab																					X
JPM4-AP49(0.5)	500-6053	4	8/14/2007	1025	Soil	Grab																					X
JPL5-AP41(0.5)	500-6078	1	8/17/2007	900	Soil	Grab											X										
JPL2-SP17(1)	500-6079	1	8/17/2007	1000	Soil	Grab									X	X			X				X				
JPL2-SP18(1)	500-6079	2	8/17/2007	1005	Soil	Grab									X	X			X				X				
JPL2-SP19(1)	500-6079	3	8/17/2007	1010	Soil	Grab									X	X			X				X				

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TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL2-SP20(1)	500-6079	4	8/17/2007	1015	Soil	Grab									X	X			X								
JPM4-STORMWATER-US#6	500-6088	1	8/20/2007	1100	Water	Grab	X								X												
JPM4-STORMWATER-DS#6	500-6088	2	8/20/2007	1105	Water	Grab	X								X												
JPL3-Stormwater-US#6	500-6089	1	8/20/2007	1000	Water	Grab	X								X	X	X	X	X		X		X				
JPL3-Stormwater-DS#6	500-6089	2	8/20/2007	1005	Water	Grab	X								X	X	X	X	X		X		X				
JPL3-Topsoil	500-6091	1	7/30/2007	1405	Soil	Grab																					X
JPM4-AP50(0.5)	500-6111	1	8/21/2007	1000	Soil	Grab									X												X
JPM4-AP51(0.5)	500-6111	2	8/21/2007	1005	Soil	Grab									X												X
JPM4-AP52(0.5)	500-6111	3	8/21/2007	1010	Soil	Grab									X												X
JPM4-AP53(0.5)	500-6111	4	8/21/2007	1015	Soil	Grab									X												X
JPM4-AP54(2)	500-6111	5	8/21/2007	1020	Soil	Grab									X												X
JPM4-AP55(0.5)	500-6111	6	8/21/2007	1025	Soil	Grab									X												X
JPM4-AP56(2)	500-6111	7	8/21/2007	1030	Soil	Grab									X												X
JPM4-AP57(0.5)	500-6111	8	8/21/2007	1035	Soil	Grab									X												X
JPM4-AP58(2)	500-6111	9	8/21/2007	1040	Soil	Grab									X												X
JPM4-AP59(0.5)	500-6111	10	8/21/2007	1045	Soil	Grab									X												X
JPL5-SP1(1)	500-6112	1	8/21/2007	900	Soil	Grab				X					X	X	X		X	X			X	X	X		
JPL5-SP2(1)	500-6112	2	8/21/2007	905	Soil	Grab				X					X	X	X		X	X			X	X	X		
JPL5-SP3(1)	500-6112	3	8/21/2007	910	Soil	Grab				X					X	X	X		X	X			X	X	X		
JPL5-SP4(1)	500-6112	4	8/21/2007	915	Soil	Grab				X					X	X	X		X	X			X	X	X		
JPL5-SP5(1)	500-6112	5	8/21/2007	920	Soil	Grab				X					X	X	X		X	X			X	X	X		
JPL5-SP6(1)	500-6112	6	8/21/2007	925	Soil	Grab				X					X	X	X		X	X			X	X	X		
JPL2-AP137(0.5)	500-6133	1	8/22/2007	1100	Soil	Grab										X			X								
JPL2-AP138(0.5)	500-6133	2	8/22/2007	1105	Soil	Grab													X								
JPL5-SP4(1)	500-6235	1	8/21/2007	915	Soil	Grab																				X	
JPL5-AF27(5)	500-6237	1	8/28/2007	930	Soil	Grab												X									
JPL2-AP139(1)	500-6238	1	8/28/2007	700	Soil	Grab									X	X	X		X				X				
JPL2-AP140(8)	500-6238	2	8/28/2007	705	Soil	Grab																	X				
JPL2-AP141(1)	500-6238	3	8/28/2007	710	Soil	Grab									X	X	X		X				X				
JPL2-AP142(8)	500-6238	4	8/28/2007	715	Soil	Grab									X	X	X		X				X				
JPL2-AP143(1)	500-6238	5	8/28/2007	720	Soil	Grab													X								
JPL2-AP144(8)	500-6238	6	8/28/2007	725	Soil	Grab													X								
JPL2-AP145(1)	500-6238	7	8/28/2007	730	Soil	Grab													X								
JPL2-AP146(8)	500-6238	8	8/28/2007	735	Soil	Grab											X										
JPL2-AF63(12)	500-6238	9	8/28/2007	740	Soil	Grab																	X				
JPL2-AP147(0.5)	500-6262	1	8/28/2007	1200	Soil	Grab										X			X								

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TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL2-AP148(0.5)	500-6262	2	8/28/2007	1205	Soil	Grab									X			X									
JPL5-AP42(0.5)	500-6332	1	9/4/2007	900	Soil	Grab				X	X				X	X	X	X	X	X			X	X	X		
JPL5-AP43(0.5)	500-6332	2	9/4/2007	905	Soil	Grab				X	X				X	X	X	X	X	X			X	X	X		
JPL5-AP44(0.5)	500-6332	3	9/4/2007	910	Soil	Grab				X	X				X	X	X	X	X	X			X	X	X		
JPL5-AP45(0.5)	500-6332	4	9/4/2007	915	Soil	Grab				X	X				X	X	X	X	X	X			X	X	X		
JPL5-AP46(0.5)	500-6332	5	9/4/2007	920	Soil	Grab				X	X				X	X	X	X	X	X			X	X	X		
JPL5-AF28(2)	500-6332	6	9/4/2007	925	Soil	Grab				X	X				X	X	X	X	X	X			X	X	X		
JPL5-AF29(2)	500-6332	7	9/4/2007	930	Soil	Grab				X	X				X	X	X	X	X	X			X	X	X		
JPL5-AP30(6)	500-6356	1	9/5/2007	900	Soil	Grab											X										
JPM4-AP60(0.5)	500-6412	1	9/7/2007	1000	Soil	Grab									X												
JPM4-AP61(0.5)	500-6412	2	9/7/2007	1005	Soil	Grab									X												
JPM4-AP62(2)	500-6412	3	9/7/2007	1010	Soil	Grab									X												
JPL5-AF31(3)	500-6444	1	9/10/2007	900	Soil	Grab									X	X	X		X								
JPL5-AP47(0.5)	500-6444	2	9/10/2007	905	Soil	Grab									X	X	X		X								
JPL5-AP48(0.5)	500-6467	1	9/11/2007	1000	Soil	Grab									X	X	X		X								
JPL5-AP49(0.5)	500-6467	2	9/11/2007	1005	Soil	Grab									X	X	X		X								
JPL5-AP50(0.5)	500-6467	3	9/11/2007	1400	Soil	Grab									X	X			X								
JPL5-AF32(4)	500-6467	4	9/11/2007	1405	Soil	Grab										X			X								
JPM4-AP63(0.5)	500-6503	1	9/12/2007	800	Soil	Grab									X												
JPL3-AP1(0.5)	500-6506	1	9/12/2007	1000	Soil	Grab									X	X			X					X			
JPL3-AP2(0.5)	500-6506	2	9/12/2007	1005	Soil	Grab									X	X			X					X			
JPL3-AP3(0.5)	500-6506	3	9/12/2007	1010	Soil	Grab									X	X			X					X			
JPL3-AP4(0.5)	500-6506	4	9/12/2007	1015	Soil	Grab									X	X			X					X			
JPL3-AP5(0.5)	500-6506	5	9/12/2007	1020	Soil	Grab									X	X			X					X			
JPL3-AP6(0.5)	500-6506	6	9/12/2007	1025	Soil	Grab									X	X			X					X			
JPL3-AP7(0.5)	500-6506	7	9/12/2007	1030	Soil	Grab									X	X			X					X			
JPL3-AP8(0.5)	500-6506	8	9/12/2007	1035	Soil	Grab									X	X			X					X			
JPL3-AP9(0.5)	500-6506	9	9/12/2007	1040	Soil	Grab									X	X			X					X			
JPL3-AP10(0.5)	500-6506	10	9/12/2007	1045	Soil	Grab									X	X			X					X			
JPL3-AP11(0.5)	500-6506	11	9/12/2007	1050	Soil	Grab									X	X			X					X			
JPL3-AF1(2)	500-6506	12	9/12/2007	1055	Soil	Grab									X	X			X					X			
JPL3-AF2(2)	500-6506	13	9/12/2007	1100	Soil	Grab									X	X			X					X			
JPL3-AF3(4)	500-6506	14	9/12/2007	1105	Soil	Grab									X	X			X					X			
JPL3-AF4(4)	500-6506	15	9/12/2007	1110	Soil	Grab									X	X			X					X			
JPL3-AF5(2)	500-6506	16	9/12/2007	1115	Soil	Grab									X	X			X					X			
JPL3-AF6(2)	500-6506	17	9/12/2007	1120	Soil	Grab									X	X			X					X			

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TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL5-AP51(0.5)	500-6513	1	9/13/2007	800	Soil	Grab																					
JPL5-AP52(0.5)	500-6550	1	9/14/2007	1000	Soil	Grab											X										
JPL3-AP12(1)	500-6592	1	9/17/2007	1000	Soil	Grab									X	X	X	X	X								
JPL3-AP13(1)	500-6592	2	9/17/2007	1005	Soil	Grab									X	X	X	X	X								
JPL3-AP14(1)	500-6592	3	9/17/2007	1010	Soil	Grab									X	X	X	X	X								
JPL3-AP15(1)	500-6592	4	9/17/2007	1015	Soil	Grab									X	X	X	X	X								
JPL3-AP16(1)	500-6592	5	9/17/2007	1020	Soil	Grab									X	X	X	X	X								
JPL3-AP17(1)	500-6592	6	9/17/2007	1025	Soil	Grab									X	X	X	X	X								
JPL3-AP18(1)	500-6592	7	9/17/2007	1030	Soil	Grab									X	X	X	X	X								
JPL3-AP19(1)	500-6592	8	9/17/2007	1035	Soil	Grab									X	X	X	X	X								
JPL3-AF7(1)	500-6592	9	9/17/2007	1040	Soil	Grab									X	X	X	X	X								
JPL3-AF8(1)	500-6592	10	9/17/2007	1045	Soil	Grab									X	X	X	X	X								
JPL3-AF9(1)	500-6592	11	9/17/2007	1050	Soil	Grab									X	X	X	X	X								
JPL3-AF10(1)	500-6592	12	9/17/2007	1055	Soil	Grab									X	X	X	X	X								
JPL3-AF11(1)	500-6592	13	9/17/2007	1100	Soil	Grab									X	X	X	X	X								
JPL3-AF12(1)	500-6592	14	9/17/2007	1105	Soil	Grab									X	X	X	X	X								
JPL3-AF13(1)	500-6592	15	9/17/2007	1110	Soil	Grab									X	X	X	X	X								
JPL3-AF14(1)	500-6592	16	9/17/2007	1115	Soil	Grab									X	X	X	X	X								
JPL3-AF15(2)	500-6592	17	9/17/2007	1120	Soil	Grab									X	X	X	X	X								
JPL3-AF16(2)	500-6592	18	9/17/2007	1125	Soil	Grab									X	X	X	X	X								
White Substance	500-6620	1	9/18/2007	1200	Soil	Grab				X	X		X														
JPM3-AF1(2)	500-6622	1	9/18/2007	900	Soil	Grab									X												
JPM3-AF6(2)	500-6622	2	9/18/2007	905	Soil	Grab									X												
JPM3-AF7(2)	500-6622	3	9/18/2007	910	Soil	Grab									X												
JPM3-AF8(2)	500-6622	4	9/18/2007	915	Soil	Grab									X												
JPM3-CR-AP1(0.5)	500-6622	5	9/18/2007	920	Soil	Grab																					
JPM3-CR-AP2(0.5)	500-6622	6	9/18/2007	925	Soil	Grab																					
JPM3-CR-AP3(0.5)	500-6622	7	9/18/2007	930	Soil	Grab																					
JPM3-CR-AP4(0.5)	500-6622	8	9/18/2007	935	Soil	Grab																					
JPM3-CR-AF1(2)	500-6622	9	9/18/2007	940	Soil	Grab																					
JPL3-AP24(0.5)	500-6650	1	9/19/2007	1200	Soil	Grab	X								X				X		X						
JPL3-AP25(0.5)	500-6650	2	9/19/2007	1205	Soil	Grab	X								X				X		X						
JPL3-AP26(0.5)	500-6650	3	9/19/2007	1210	Soil	Grab	X								X				X		X						
JPL3-AP27(0.5)	500-6650	4	9/19/2007	1215	Soil	Grab	X								X				X		X						
JPL3-AP28(0.5)	500-6650	5	9/19/2007	1220	Soil	Grab	X								X				X		X						
JPL3-AP29(0.5)	500-6650	6	9/19/2007	1225	Soil	Grab	X								X				X		X						

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CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL3-AF21(1)	500-6650	7	9/19/2007	1230	Soil	Grab	X							X					X	X							
JPL3-AF22(1)	500-6650	8	9/19/2007	1235	Soil	Grab	X							X					X	X							
JPL3-AF23(1)	500-6650	9	9/19/2007	1240	Soil	Grab	X							X					X	X							
JPL3-AF24(1)	500-6650	10	9/19/2007	1245	Soil	Grab	X							X													
JPL3-AP20(0.5)	500-6651	1	9/19/2007	1100	Soil	Grab	X							X													
JPL3-AP21(0.5)	500-6651	2	9/19/2007	1105	Soil	Grab	X							X													
JPL3-AP22(0.5)	500-6651	3	9/19/2007	1110	Soil	Grab	X							X													
JPL3-AP23(0.5)	500-6651	4	9/19/2007	1115	Soil	Grab	X							X													
JPL3-AF17(1)	500-6651	5	9/19/2007	1120	Soil	Grab	X							X													
JPL3-AF18(1)	500-6651	6	9/19/2007	1125	Soil	Grab	X							X													
JPL3-AF19(1)	500-6651	7	9/19/2007	1130	Soil	Grab	X							X													
JPL3-AF20(1)	500-6651	8	9/19/2007	1135	Soil	Grab	X							X													
JPM4-AP64(0.5)	500-6687	1	9/20/2007	800	Soil	Grab								X													
JPL3-Concrete	500-6713	1	9/21/2007	1000	Concrete	Composite	X				X	X															
JPL3-AP30(0.5)	500-6714	1	9/21/2007	900	Soil	Grab													X								
JPL3-AP31(0.5)	500-6714	2	9/21/2007	905	Soil	Grab									X	X			X								
JPL3-AP32(0.5)	500-6714	3	9/21/2007	910	Soil	Grab	X																				
JPL3-AP33(0.5)	500-6743	1	9/24/2007	1000	Soil	Grab													X								
JPL3-AP24(0.5)	500-6750	1	9/19/2007	1200	Soil	Grab																					X
JPL3-AP28(0.5)	500-6750	2	9/19/2007	1220	Soil	Grab																					X
JPL3-AF13(1)	500-6751	1	9/17/2007	1110	Soil	Grab																					
JPL3-AP34(0.5)	500-6812	1	9/27/2007	730	Soil	Grab														X							
JPL3-AP35(0.5)	500-6812	2	9/27/2007	735	Soil	Grab										X				X							
JPL3-AP36(0.5)	500-6812	3	9/27/2007	740	Soil	Grab									X	X			X								
JPL3-AP37(0.5)	500-6812	4	9/27/2007	745	Soil	Grab									X	X		X	X								
JPL3-AF25(2)	500-6812	5	9/27/2007	750	Soil	Grab									X	X	X	X	X								
JPL3-AF26(2)	500-6812	6	9/27/2007	755	Soil	Grab									X	X	X	X	X								
JPL3-AF27(2)	500-6812	7	9/27/2007	800	Soil	Grab									X				X								
JPL2-CP95(0.5)	500-6900	1	10/2/2007	1000	Soil	Grab	X							X													
JPL2-CP96(0.5)	500-6900	2	10/2/2007	1005	Soil	Grab	X							X													
JPL2-CP97(0.5)	500-6900	3	10/2/2007	1010	Soil	Grab	X							X													
JPL2-CP98(0.5)	500-6900	4	10/2/2007	1015	Soil	Grab	X							X													
JPL2-CP95(0.5)	500-7025	1	10/2/2007	1000	Soil	Grab																					X
JPL2-CP96(0.5)	500-7025	2	10/2/2007	1005	Soil	Grab																					X
JPL2-CP97(0.5)	500-7025	3	10/2/2007	1010	Soil	Grab																					X
JPM4-Demo Debris	500-7026	1	10/8/2007	900	Concrete	Grab	X							X													

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 39 of 40)

SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL3-SP1(0.5)	500-7047	1	10/9/2007	1145	Soil	Grab	X								X	X	X	X	X	X	X	X	X				
JPL3-SP2(0.5)	500-7047	2	10/9/2007	1150	Soil	Grab	X								X	X	X	X	X	X	X	X	X				
JPL3-SP3(0.5)	500-7047	3	10/9/2007	1155	Soil	Grab	X								X	X	X	X	X	X	X	X	X				
JPL3-SP4(0.5)	500-7047	4	10/9/2007	1200	Soil	Grab	X								X	X	X	X	X	X	X	X	X				
JPL3-SP5(0.5)	500-7047	5	10/9/2007	1205	Soil	Grab	X								X	X	X	X	X	X	X	X	X				
JPL3-SP6(0.5)	500-7047	6	10/9/2007	1210	Soil	Grab	X								X	X	X	X	X	X	X	X	X				
JP-BorrowSource Clay 1	500-7048	1	10/9/2007	1120	Soil	Grab	X				X	X															
JPM4 POST SB1 NN	500-7145	1	10/12/2007	1315	Soil	Composite	X								X												
JPM4 POST SB1 NE	500-7145	2	10/12/2007	1345	Soil	Composite	X								X												
JPM4 POST SB1 SN	500-7145	3	10/12/2007	1330	Soil	Composite	X								X												
JPM4 POST SB1 SE	500-7145	4	10/12/2007	1400	Soil	Composite	X								X												
JPL3-SP4(0.5)	500-7162	1	10/9/2007	1200	Soil	Grab																					X
JPL3-SP5(0.5)	500-7162	2	10/9/2007	1205	Soil	Grab																					X
JPL3-SP6(0.5)	500-7162	3	10/9/2007	1210	Soil	Grab																					X
JPL7-Fill Borrow Source	500-7227	1	10/17/2007	1000	Soil	Grab					X	X															
JPL2-AP149(0.5)	500-7513	1	10/31/2007	1215	Soil	Grab									X												
JPL2-AP150(0.5)	500-7513	2	10/31/2007	1220	Soil	Grab									X												
JPL2-AP151(0.5)	500-7513	3	10/31/2007	1225	Soil	Grab									X												
JPL2-AP152(0.5)	500-7513	4	10/31/2007	1230	Soil	Grab									X												
JPL2-AF64(1)	500-7513	5	10/31/2007	1235	Soil	Grab									X												
JPL2-AF65(1)	500-7513	6	10/31/2007	1240	Soil	Grab									X												
JPL2-AF66(1)	500-7513	7	10/31/2007	1245	Soil	Grab									X												
JPL2-AF65(1)	500-7607	1	10/31/2007	1240	Soil	Grab																					X
JPL5-RS-AP1(0.5)	500-14347	1	10/1/2008	900	Soil	Grab		X					X														
JPL5-RS-AP2(0.5)	500-14347	2	10/1/2008	905	Soil	Grab		X					X														
JPL5-RS-AP3(0.5)	500-14347	3	10/1/2008	910	Soil	Grab		X					X														
JPL5-RS-AP4(0.5)	500-14347	4	10/1/2008	915	Soil	Grab		X					X														
JPL5-RS-AP5(0.5)	500-14347	5	10/1/2008	920	Soil	Grab		X					X														
JPL5-RS-AP6(0.5)	500-14347	6	10/1/2008	925	Soil	Grab		X					X														
JPL5-RS-AP7(0.5)	500-14347	7	10/1/2008	930	Soil	Grab		X					X														
JPL5-RS-AP8(0.5)	500-14347	8	10/1/2008	935	Soil	Grab		X					X														
JPL5-RS-AP9(0.5)	500-14347	9	10/1/2008	940	Soil	Grab		X					X														
JPL5-RS-AP10(0.5)	500-14347	10	10/1/2008	945	Soil	Grab		X					X														
JPL5-RS-AP11(0.5)	500-14347	11	10/1/2008	950	Soil	Grab		X					X														
JPL5-RS-AP12(0.5)	500-14347	12	10/1/2008	955	Soil	Grab		X					X														
JPL5-RS-AF1(6)	500-14347	13	10/1/2008	1000	Soil	Grab		X					X														

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

CHAIN OF CUSTODY SUMMARY TABLE

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 40 of 40)

SAMPLE IDENTIFICATION	SAMPLE DELIVERY GROUP	LAB IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	EXPLOSIVES (8330)	PAH (8270C)	PCN (8270C)	TPH DRO (8010)	TPH GRO (8010)	PCB (8082)	Metals (6010B/7471A)	Mercury (7471A)	Lead (6010B)	Zinc (6010B)	Arsenic (6010B)	Barium (6010B)	Copper (6010B)	Cadmium (6010B)	Chromium (6010B)	Nickel (6010B)	Silver (6010B)	Antimony (6010B)	Thallium (6010B)	Arsenic TCLP (1311/6010B)	Lead TCLP (1311/6010B)
JPL5-RS-AF2(6)	500-14347	14	10/1/2008	1005	Soil	Grab		X					X														
JPL5-RS-AF3(6)	500-14347	15	10/1/2008	1010	Soil	Grab		X					X														
JPL5-RS-AF4(6)	500-14347	16	10/1/2008	1015	Soil	Grab		X					X														
JPL5-RS-AF5(6)	500-14347	17	10/1/2008	1020	Soil	Grab		X					X														
JPL5-RS-AF6(6)	500-14347	18	10/1/2008	1025	Soil	Grab		X					X														
JPL5-RS-AF7(6)	500-14347	19	10/1/2008	1030	Soil	Grab		X					X														
JPL5-RS-AF8(6)	500-14347	20	10/1/2008	1035	Soil	Grab		X					X														
JPL5-RS-AF9(6)	500-14347	21	10/1/2008	1040	Soil	Grab		X					X														

TCLP - Toxicity Characteristic Leaching Procedure
DRO - diesel range organics
GRO - gasoline range organics
PAH - polynuclear aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCN - polychlorinated naphthalene
TPH - total petroleum hydrocarbon

APPENDIX B

CHAINS OF CUSTODY AND COOLER RECEIPT FORMS

**SEVERN
TRENT
STL**

STL Chicago COC: 051707
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: Contact: S. Rosy / M B. Brooks
Company: MWH
Address: JOLLA
Phone: 815 423 6841
E-Mail: _____

Bill To: Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 500-4270

Package Sealed Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Temperature °C of Cooler 4.2	
Within Hold Time Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA
pH Check OK Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA	Res Cl₂ Check OK Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA
Sample Labels and COC Agree Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Analytes							
			Date	Time			PAT	As	As	Cd	Pb	Zn	Cu	
1		JPLZ-AP117(0.5)	5/17/07	1200	S	G		X	X	X	X	X	X	
2		↓ AP118(0.5)		1205				X	X	X	X	X	X	
3		↓ AP119(0.5)		1210				X	X	X	X	X	X	
4		↓ AP120(0.5)		1215				X	X	X	X	X	X	
5		JPLZ-PF1(2)		1220			X	X	X	X	X	X	X	
6		↓ PF2(2)		1225			X	X	X	X	X	X	X	
7		↓ PF3(2)		1230			X	X	X	X	X	X	X	

Additional Analyses / Remarks

2 DAY TAT

WO: 023

BDA: 4016

RELINQUISHED BY <u>[Signature]</u> COMPANY <u>MWH</u> DATE <u>5/17/07</u> TIME <u>1600</u>	RECEIVED BY <u>[Signature]</u> COMPANY <u>SR</u> DATE <u>5/17/07</u> TIME <u>1700</u>
RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____	RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O = _____
- Container Key.**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 5/17/07

Courier: SR Hand Delivered

Bill of Lading

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-4270

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-7	digestion + ICP	<i>Lisa Peables</i>	<i>T. Sch</i>	5/18/07	1500	
1-7	ICP	<i>T. Sch</i>	<i>Rh 5-17A</i>	5/21/07	09:00	

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-4270

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-7	metals	<i>[Signature]</i>	<i>[Signature]</i>	5/18/07	0830	
1-7	metals	<i>[Signature]</i>	<i>[Signature]</i>	5/18/07	1000	
1-7	% Solids	<i>[Signature]</i>	<i>[Signature]</i>	5/18/07	1220	
1-7	% Solids	<i>[Signature]</i>	<i>[Signature]</i>	5/18/07	1430	
5-7	ODG	<i>[Signature]</i>	<i>[Signature]</i>	5/18/07	1445	
5	ODG	<i>[Signature]</i>	<i>[Signature]</i>	05/18/07	1700	Marked
5-7	ODG	<i>[Signature]</i>	<i>[Signature]</i>	05/21/07	0805	
5	ODG	<i>[Signature]</i>	<i>[Signature]</i>	05/21/07	1300	

06/08/2007 page 54 of 203

SEVERN TRENT STL

STL Chicago 606.051807
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: _____

Bill To: SANLEN

Shaded Areas For Internal Use Only _____ of _____

Contact: S. Rosypal 848 001 5
 Company: MWH
 Address: SOAM
 Phone: 815-423-6241
 Fax: _____
 E-Mail: _____

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Lab Lot# 500-4207
Package Sealed
 Yes No
Samples Sealed
 Yes No
Received on Ice
 Yes No
Samples Intact
 Yes No
Temperature °C of Cooler
5.5

Sampler Name: Ryan Young
Signature: [Signature]
Project Name: LAP SOIL
Project Number: _____
Project Location: _____
Lab PM: _____
Date Required: _____
Hard Copy: / /
Fax: / /

Refr #	# / Cont.	Volume	Preserv	Matrix	Comp/Grab	Cl	Co	Ag	As	Pb	Zn
						X	X	X	X	X	X

Within Hold Time
 Yes No
Preserv. Indicated
 Yes No NA
pH Check OK
 Yes No NA
Res Cl₂ Check OK
 Yes No NA
Sample Labels and COC Agree
 Yes No COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Cl	Co	Ag	As	Pb	Zn	Additional Analyses / Remarks
			Date	Time									
1		JPL2-A-P121 (O.S)	5/18/07	1030	S	E	X	X	X	X	X	X	Z-DAY TAG WO: 02 02-3 BDA 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 5/18/07 TIME: 1400
 RECEIVED BY: [Signature] COMPANY: STL DATE: 5/18/07 TIME: 1300

- Matrix Key**
 WW = Wastewater SE = Sediment
 W = Water SO = Solid
 S = Soil DS = Drum Solid
 SL = Sludge DL = Drum Liquid
 MS = Miscellaneous L = Leachate
 OL = Oil WI = Wipe
 A = Air O = _____
- Container Key**
 1. Plastic
 2. VOA Val
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS: _____
 Date Received: _____
 Courier: STL Hand Delivered
 Bill of Lading: _____

05/25/2007
Page 33 of 119

**SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record**

Job No: 500-4287

Client: JOAN

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	digestion to ICP ELC	Lisa Peckley T. Sam	T. Sam for 5-19-07	5/21/07 5/22/07	1500 13:30 7:52-07	

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-4287-1

Client: JCAP

*

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	metals	[Signature]	[Signature]	5/21/07	0810	
1	metals	[Signature]	[Signature]	5/21/07	1335	
1	% Solids	[Signature]	[Signature]	5/21/07	1400	
1	% Solids	[Signature]	[Signature]	5/21/07	1515	

STL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-43 7

Client: VOAPP

06/14/2007

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-8	metals	JLT	Lisa Peltz	5/22/07	0830	
1-8	metals	Lisa Peltz	JLT	5/22/07	1050	
1-8	%Solids	JLT	Paul J. Keith	5/22/07	1525	returned w/o sig 6/18/07
1-8	%Solids	JLT	Richard P.			returned w/o sig 6/18/07
4-8	ORG	JLT				

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STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:
 Contact: S. Rodriguez
 Company: MWH
 Address: 10000
 Phone: 818-423-6801
 Fax:
 E-Mail:

Bill To: CANTEL
 Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only ___ of ___
Lab Lot# 500-4317
 Package Sealed Yes No
 Samples Sealed Yes No
 Received on Ice Yes No
 Samples Intact Yes No
 Temperature °C of Cooler 4.3

Sampler Name: Ryan Young
Signature: [Signature]
Project Name: LAP SOIL
Project Number:
Project Location:
Lab PM:
Date Required:
 Hard Copy: 1/1
 Fax: 1/1

Ref#	# / Cont.	Volume	Preserv

Within Hold Time Yes No
Preserv. Indicated Yes No NA
pH Check OK Yes No NA
Res Cl₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No
COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cd	Ag	As	Cu	Zn	Additional Analyses / Remarks
			Date	Time									
1		JPLZ - AP12-2 (O.C)	5/21/07	0700	S	G	X	X	X	X	X	X	2 Day NA
													WD: 023
													BOA: 4DL6

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 5/21/07 TIME: 1400

RECEIVED BY: [Signature] COMPANY: SR DATE: 5/21/07 TIME: 1600

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OK = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Wipe
 - O =

- Container Key**
- Plastic
 - VOA Vial
 - Sterile Plastic
 - Amber Glass
 - Widermouth Glass
 - Other

- Preservative Key**
- HCl, Cool to 4°
 - #2SO4, Cool to 4°
 - HNO3, Cool to 4°
 - NaOH, Cool to 4°
 - NaOH/Zn, Cool to 4°
 - Cool to 4°
 - None

COMMENTS

Date Received: 5/21/07

Courier: STL Hand Delivered

Bill of Lading

page 46 of 162 06/14/2007

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S&S **BNI To:** S&S **Shaded Areas For Internal Use Only** of 1

Contact: S. Koslowski / B. Blom Contact: _____
 Company: MWH Company: _____
 Address: JORDAN Address: _____
 Phone: 815-423-6841 Phone: _____
 Fax: _____ Fax: _____
 E-Mail: _____ Quote: _____

Lab Lot# 500-4317

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	

Sampler Name: <u>RYAN YOUNG</u>		Signature: 		Refug #										Within Hold Time Yes No		Preserv. Indicated Yes No NA	
Project Name: <u>LAP SOILS</u>		Project Number:		# / Cont.										pH Check OK Yes No NA		Res Cl₂ Check OK Yes No NA	
Project Location:		Date Required		Volume										Sample Labels and COC Agree Yes No		COC not present	
Lab PM:		Hard Copy: <u> </u> <u> </u> <u> </u>		Preserv										Additional Analyses / Remarks			
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	Cr	Cd	Pb	Ag	As	Zn					
<u>2</u>		<u>JPLZ-SP8(0.5)</u>	<u>5/21/07</u>	<u>1100</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>Z DAY TAT</u>				
<u>3</u>		<u>↓ SP9(0.5)</u>	<u>↓</u>	<u>1105</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>WD: 023</u>				
													<u>BDA: 4311</u>				

RELINQUISHED BY <u>[Signature]</u> COMPANY <u>MWH</u> DATE <u>5/21/07</u> TIME <u>1600</u>	RECEIVED BY <u>[Signature]</u> COMPANY <u>SR</u> DATE <u>5/21/07</u> TIME <u>1600</u>
RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____	RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

Matrix Key

WW = Wastewater SE = Sediment
 W = Water SO = Solid
 S = Soil DS = Drum Solid
 SL = Sludge DL = Drum Liquid
 MS = Miscellaneous L = Leachate
 OL = Oil WI = Wipe
 A = Air O = _____

Container Key

1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key

1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 5/21/07

Courier: STL **Hand Delivered**

Bill of Lading

06/14/2007 Page 47 of 162

**SEVERN
TRENT** **STL**

STL Chicago (60)052107C
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact: S. VASY, PA / G. B. BODICK
Company: MWH
Address: JOGA
Phone: 815-423-6841
Fax:
E-Mail:

Bill To:
Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only of
Lab Lot# 500-4317
Package Sealed: Yes No
Samples Sealed: Yes No
Received on Ice: Yes No
Samples Intact: Yes No
Temperature °C of Cooler

Sampler Name:		Signature:		Refry #											Within Hold Time	Preserv. Indicated			
<u>Ryan Young</u>		<u>[Signature]</u>		# / Cont.											Yes No	Yes No	NA		
Project Name:		Project Number:		Volume											pH Check OK		Res Cl ₂ Check OK		
<u>LAP SOIL</u>				Preserv.											Yes No NA	Yes No	NA		
Project Location:		Date Required		Matrix	Comp/Grab											Sample Labels and COC Agree			
Lab PM: <td colspan="2">Hard Copy: <u> </u> Fax: <u> </u></td> <td colspan="10"></td> <td>Yes No</td> <td colspan="2">COC not present</td> <td></td>		Hard Copy: <u> </u> Fax: <u> </u>														Yes No	COC not present		
Laboratory ID	MS-MSD	Client Sample ID		Date	Time	As	As	Cd	Pb	Cu	Zn	PAH	620/DRD	Additional Analyses / Remarks					
4		JPL2-AST-TF1(3)		5/21/07	1300	S	E	✓	✓	✓	✓	✓	✓	2 DAY TEST					
5	X	↓ TF2(4)		↓	1305	↓	↓	✓	✓	✓	✓	✓	✓						
6		JPL2-AST-TF1(0.5)		↓	1310	↓	↓	✓	✓	✓	✓	✓	✓	WO: 2/23					
7		↓ TP2(0.5)		↓	1315	↓	↓	✓	✓	✓	✓	✓	✓						
8	X	↓ TP3(0.5)		↓	1320	↓	↓	✓	✓	✓	✓	✓	✓	BDA: 4/14					

RELINQUISHED BY [Signature] COMPANY MWH DATE 5/21/07 TIME 1600
RECEIVED BY [Signature] COMPANY en DATE 5/21/07 TIME 1600

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Liquid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wadsworth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 5/21/07
Courier: se Hand Delivered
Bill of Lading

06/14/2007
Page 48 of 162

Metals Worksheet

Batch Number: 500-15414
 Method: 3050B
 Analyst: Peebles, Lisa

Date Open: May 22 2007 10:20AM
 Batch End: May 22 2007 10:20AM

Analysed
 06/14/2007

Lab ID	Client ID	Basis	Initial weight/volume of sample	Final weight/volume of sample	M07DSPKIC_00001
MB~500-15414/1			1.0000 g	100.0000 mL	
LCS~500-15414/2			1.0000 g	100.0000 mL	1.0000 mL
500-4210-A-1	CRAWFORD BASIN SLUDGE	T	1.1135 g	100.0000 mL	
500-4317-A-1	JPL2-AP122(0.5)	T	1.1109 g	100.0000 mL	
500-4317-A-2	JPL2-SP8(0.5)	T	1.1324 g	100.0000 mL	
500-4317-A-3	JPL2-SP9(0.5)	T	1.0628 g	100.0000 mL	
500-4317-A-4	JPL2-AST-TF1(3)	T	1.0695 g	100.0000 mL	
500-4317-A-5	JPL2-AST-TF2(4)	T	1.0878 g	100.0000 mL	
500-4317-A-5~DU		T	1.1094 g	100.0000 mL	
500-4317-A-5~MS	JPL2-AST-TF2(4)	T	1.0596 g	100.0000 mL	1.0000 mL
500-4317-A-6	JPL2-AST-TP1(0.5)	T	1.0201 g	100.0000 mL	
500-4317-A-7	JPL2-AST-TP2(0.5)	T	1.0330 g	100.0000 mL	
500-4317-A-8	JPL2-AST-TP3(0.5)	T	1.1047 g	100.0000 mL	
500-4317-A-8~DU		T	1.1189 g	100.0000 mL	
500-4317-A-8~MS	JPL2-AST-TP3(0.5)	T	1.1330 g	100.0000 mL	1.0000 mL

Acid used for pH adjustment: n/a
 Analyst: lp
 Balance ID: n/a
 Blank Soil Lot Number: n/a
 First End time: n/a
 Hydrogen peroxide lot number: c35a21
 Lot # of hydrochloric acid: c42a22
 Logbook ID for diluted Nitric: n/a
 Lot # of Nitric Acid: e02054
 Hood ID or number: n/a
 Hot Block ID number: 1739
 Oven, Bath or Block Temperature 1: 90
 Oven, Bath or Block Temperature 2: 90
 Person's name who witnessed reagent drop: n/a
 First Start time: 10:20
 Temperature: n/a
 ID number of the thermometer: n/a
 Digestion Tubes: n/a

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Metals Worksheet

Batch Number: 500-15414

Method: 3050B

Analyst: Peebles, Lisa

Date Open: May 22 2007 10:20AM

Batch End: May 22 2007 10:20AM

Comments

Lab ID	Client ID	Basis	Analysis comment
MB~500-15414/1			
LCS~500-15414/2			
500-4210-A-1	CRAWFORD BASIN SLUDGE	T	Ca,Si
500-4317-A-1	JPL2-AP122(0.5)	T	As,Cd,Cu,Pb,Ag,Zn CLP-LIKE LCG
500-4317-A-2	JPL2-SP8(0.5)	T	As,Cd,Cu,Pb,Ag,Zn CLP-LIKE LCG
500-4317-A-3	JPL2-SP9(0.5)	T	As,Cd,Cu,Pb,Ag,Zn CLP-LIKE LCG
500-4317-A-4	JPL2-AST-TF1(3)	T	As,Cd,Cu,Pb,Ag,Zn CLP-LIKE LCG
500-4317-A-5	JPL2-AST-TF2(4)	T	As,Cd,Cu,Pb,Ag,Zn CLP-LIKE LCG
500-4317-A-5~DU		T	As,Cd,Cu,Pb,Ag,Zn CLP-LIKE LCG
500-4317-A-5~MS	JPL2-AST-TF2(4)	T	As,Cd,Cu,Pb,Ag,Zn CLP-LIKE LCG
500-4317-A-6	JPL2-AST-TP1(0.5)	T	As,Cd,Cu,Pb,Ag,Zn CLP-LIKE LCG
500-4317-A-7	JPL2-AST-TP2(0.5)	T	As,Cd,Cu,Pb,Ag,Zn CLP-LIKE LCG
500-4317-A-8	JPL2-AST-TP3(0.5)	T	As,Cd,Cu,Pb,Ag,Zn CLP-LIKE LCG
500-4317-A-8~DU		T	As,Cd,Cu,Pb,Ag,Zn CLP-LIKE LCG
500-4317-A-8~MS	JPL2-AST-TP3(0.5)	T	As,Cd,Cu,Pb,Ag,Zn CLP-LIKE LCG

Batch Comment:

labnet batch #200022

General Chemistry Worksheet

Batch Number: 500-15460
 Method: PercentMoisture
 Analyst: Kolarczyk, Paul F

Date Open: May 22 2007 3:28PM
 Batch End:

Analyses 906/14/2007

Lab ID	Client ID	Basis	Empty Dish Weight	Mass of wet Sample	Mass of Dry Sample
500-4317-A-1	JPL2-AP122(0.5)	T	1.2644 g	11.9251 g	11.3007 g
500-4317-A-2	JPL2-SP8(0.5)	T	1.2482 g	12.0062 g	9.8126 g
500-4317-A-3	JPL2-SP9(0.5)	T	1.2821 g	12.7063 g	11.7880 g
500-4317-A-4	JPL2-AST-TF1(3)	T	1.2503 g	15.4791 g	11.9815 g
500-4317-A-5	JPL2-AST-TF2(4)		1.2789 g	11.4771 g	9.5519 g
500-4317-A-5~DU			1.2861 g	11.3380 g	9.4859 g
500-4317-A-5~MS	JPL2-AST-TF2(4)		1.2789 g	11.4771 g	9.5519 g
500-4317-A-5~MSD	JPL2-AST-TF2(4)		1.2789 g	11.4771 g	9.5519 g
500-4317-A-6	JPL2-AST-TP1(0.5)	T	1.2576 g	11.9866 g	11.1743 g
500-4317-A-7	JPL2-AST-TP2(0.5)	T	1.2781 g	12.1358 g	11.4260 g
500-4317-A-8	JPL2-AST-TP3(0.5)	T	1.2748 g	11.1960 g	10.6033 g
500-4317-A-8~DU		T	1.2886 g	11.2689 g	10.7351 g
500-4317-A-8~MS	JPL2-AST-TP3(0.5)	T	1.2748 g	11.1960 g	10.6033 g
500-4317-A-8~MSD	JPL2-AST-TP3(0.5)	T	1.2748 g	11.1960 g	10.6033 g
500-4322-C-1	B-1	T	1.2847 g	12.8410 g	11.6833 g
500-4322-C-2	B-2	T	1.2823 g	13.8448 g	13.0788 g
500-4322-C-3	B-3	T	1.2673 g	11.5053 g	11.2767 g
500-4322-C-4	B-4	T	1.2770 g	12.6615 g	11.9984 g
500-4322-C-5	B-5	T	1.2815 g	14.3188 g	13.7525 g
500-4322-C-6	B-6	T	1.2722 g	11.6176 g	11.0017 g
500-4286-A-4	PHII-DEP14-5,5/16/07	T	1.2731 g	11.8239 g	7.3530 g
~					
~					

Date samples were place in the oven: 05/22/07
 Oven Temp when samples are put in oven: 105C
 Oven ID: 776

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**SIL Chicago
 Infra-Laboratory Internal Sample Custody Transfer Record**

Job No: 500-4317

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
L-P	digestion to ILP ILP	Lina Garcia T.C. W	T.C. W	5/22/07	1500	
L-P			R. S. 177	5/23/07	08:00	

CHI-22-11-019/A-12/02

SEVERN TRENT STL

STL Chicago COL: 0523 07
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Rusy et al / B. Brooks
Contact: _____
Company: MWLH
Address: Joady
Phone: 815-423-6441
Fax: _____
E-Mail: _____

Bill To: SAME
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 500-4362
Package Sealed Yes No
Samples Sealed Yes No
Recalled on Ice Yes No
Samples Intact Yes No
 Date: 06/14/2007

Sampler Name: RYAN YOUNG
Signature: [Signature]
Project Name: LAP SOIL
Project Number: [Blank]
Project Location: _____
Lab PM: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Refr #	# / Cont.	Volume	Preserv

Temperature °C of Cooler 4.2
Within Hold Time Yes No
Preserv. Indicated Yes No NA
pH Check OK Yes No NA
Res Cl₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No
COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb												
			Date	Time															
1		JPL2-CP93(0.5)	5/23/07	1300	S	G	X												
2		↓ CP94(0.5)	↓	1305	S	G	X												

Additional Analyses / Remarks

2 DAY TAT
 WD: 023
 BOX: 4016

RELINQUISHED BY: [Signature] COMPANY MWLH DATE 5/23/07 TIME 1400
RELINQUISHED BY: [Signature] COMPANY DATE TIME

RECEIVED BY: [Signature] COMPANY DATE 5/23/07 TIME 1530
RECEIVED BY: [Signature] COMPANY DATE TIME

Matrix Key
 WW = Wastewater SE = Sediment
 W = Water SO = Solid
 S = Soil DS = Drum Solid
 SL = Sludge DL = Drum Liquid
 MS = Miscellaneous L = Leachate
 OL = Oil WT = Wipe
 A = Air O = _____

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 5, 23, 07
Courier: STL **Hand Delivered**
Bill of Lading

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-4362

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-2	digestion to ICP	Lin Peelle	T. Gil	5/24/07	1500	
1-2	ICP	T. Gil	June 19+	5/31/07	08:30	

06/14/2007
Page 30 of 97

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-4362

Client: JOHN

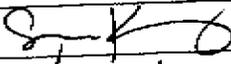
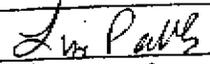
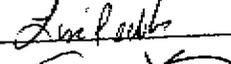
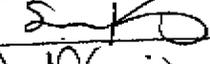
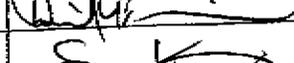
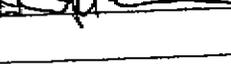
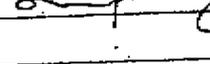
Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1,2	metals	<i>[Signature]</i>	<i>Lin Peltis</i>	5/24/07	0850	
1,2	metals	<i>Lin Peltis</i>	<i>[Signature]</i>	5/24/07	1200	

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STL Chicago Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-4427

Client: MWH - JOAAT

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-5	metals			5/30/07	0730	
1-5	metals			5/24/07	1000	
1-5.	Ag			05/24/07	1005	
1-5	Ag			05/24/07	1500	

**SEVERN
TRENT
STL**

STL Chicago CFC: 052907
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. Rosyent / B. Brooks
Company: MWH
Address: 3000
Phone: 815 423 6841
Fax:
E-Mail:

Bill To: SAME

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 500-4427

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	Res Cl ₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name: RYAN YOUNG Signature: [Signature]
Project Name: LAPSOIL Project Number:
Project Location: Date Required: _____
Lab PM: Hard Copy: _____
Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Zn	Cu	Pb	As	As	Cd	PATT	DRO/GRD
			Date	Time										
1		JPL2-AP123(0.5)	5/29/07	1100	S	G	X	X	X	X	X	X		
2		↓ AP124(0.5)		1105			X	X	X	X	X	X		
3		JPL2-PF4(4)		1110			X	X	X	X	X	X		
4		↓ PF5(4)		1115			X	X	X	X	X	X	X	
5		↓ PF6(6)		1120			X	X	X	X	X	X	X	

Additional Analyses / Remarks

2 DAY TAT

WD: 023

BDA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 5/29/07 TIME 1600 RECEIVED BY [Signature] COMPANY STL DATE 5/29/07 TIME 1615

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 1/1/1

Courier: STL Hand Delivered

Bill of Lading



STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Pasyport / B. B. Books
Contact: S. Pasyport / B. B. Books
Company: MWH
Address: JONAP
Phone: 815-423-6841
Fax:
E-Mail:

Bill To: SAME
Contact:
Company:
Address:
Phone:
Fax:
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only 1 of 1
Lab Lot# 500-4447
Package Sealed
 Yes No
Samples Sealed
 Yes No
Received on Ice
 Yes No
Samples Intact
 Yes No
Temperature °C of Cooler
 4.0

Sampler Name:		Signature:		Refrig #																	
Project Name:		Project Number:		Volume																	
Project Location:		Date Required		Preserv																	
Lab PM:		Hard Copy: / /		Matrix	Comp/Grab	Pb															
Laboratory ID		Client Sample ID																			Date
		JPL23A-SPS(1)		5/30/07	1100	S	G	X													

Within Hold Time
 Yes No
Preserv. Indicated
 Yes No NA
pH Check OK
 Yes No NA
Res Cl₂ Check OK
 Yes No NA
Sample Labels and COC Agree
 Yes No COC not present

Additional Analyses / Remarks
 2 DAY TAT
 WD: 023
 BDA: 4D16

RELINQUISHED BY: *R. Pasyport* COMPANY: MWH DATE: 5/30/07 TIME: 1400
 RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

RECEIVED BY: *MT* COMPANY: STL DATE: 5/30/07 TIME: 1400
 RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
 WW = Wastewater SE = Sediment
 W = Water SO = Solid
 S = Soil DS = Drum Solid
 SL = Sludge DL = Drum Liquid
 MS = Miscellaneous L = Leachate
 OL = Oil WI = Wipe
 A = Air O = _____
- Container Key**
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 5/30/07
Courier: STL **Hand Delivered**
Bill of Lading

Page 29 of 98 06/18/2007

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: **←** Bill To: **SAME** Shaded Areas For Internal Use Only 1 of 1

Contact: **S. Posypala / B. Brooks** Company: **MWH** Address: **JOANN**

Phone: **815-423-6841** PO#: _____ Quote: _____

Lab Lot# **500-4472**

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	

Sampler Name: **Ryan Young** Signature: *[Signature]* Refrig # _____ # / Cont. _____

Project Name: **LAPSOIL** Project Number: _____ Volume _____ Preserv _____

Project Location: _____ Date Required _____ Hard Copy: _____ Fax: _____

Lab PM: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PPO/Grp	PART	Additional Analyses / Remarks											
			Date	Time					Within Hold Time Yes No NA	Preserv. Indicated Yes No NA	pH Check OK Yes No NA	Res Cl ₂ Check OK Yes No NA	Sample Labels and COC Agree Yes No COC not present							
10		JPL2-TP4(1)	5/31/07	940	S	S	X	X	2 DAY TAT											
11		TP5(1)		945			X	X												
12		TP6(1)		950			X	X	WD: 023											
13		TF3(5)		955			X	X												
14		TF4(7)		1000			X	X	BDA: 4016											

RELINQUISHED BY: *[Signature]* COMPANY: **MWH** DATE: **5/31/07** TIME: **1400**

RECEIVED BY: *[Signature]* COMPANY: **STL** DATE: **5/21/07** TIME: **1400**

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O = _____
- Container Key**
- Plastic
 - VOA Vial
 - Sterile Plastic
 - Amber Glass
 - Widemouth Glass
 - Other
- Preservative Key**
- HCl, Cool to 4°
 - H2SO4, Cool to 4°
 - HNO3, Cool to 4°
 - NaOH, Cool to 4°
 - NaOH/Zn, Cool to 4°
 - Cool to 4°
 - None

COMMENTS

Date Received **5/31/07**

Courier: **STL** Hand Delivered

Bill of Lading

**SEVERN
TRENT**

STL

STL Chicago **CD: 060607**
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

BNI To: **SAME**

Shaded Areas For Internal Use Only 1 of 1

Contact: **S. Bosypal / R. Brooks**
 Company: **MWH**
 Address: **JOLLAH**
 Phone: **815-423-6841**
 Fax:
 E-Mail:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Lab Lot# 500-4561

Package Sealed Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Temperature °C of Cooler 4.0	
Within Hold Time Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA
pH Check OK Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA
Sample Labels and CDC Agree Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Refr #											
			Date	Time			# / Cont.	Volane	Preserv	Ag	As	Cd	Pb	Cu	Zn			
1		JPLZ-AP129(1)	6/6/07	1000	S	G												
2		AP130(4)		1005				X	X	X	X	X	X					
3		AP131(1)		1010				X	X	X	X	X	X					
4		AP132(4)		1015				X	X	X	X	X	X					
5		AP133(1)		1020				X	X	X	X	X	X					
6		AP134(4)		1025				X	X	X	X	X	X					
7		AP135(1)		1030				X	X	X	X	X	X					
8		AP136(4)		1035				X	X	X	X	X	X					
9		AP62(10)		1040				X	X	X	X	X	X					

Additional Analyses / Remarks

2 DAY TAT

NO: 023

BOA: 4016

RELINQUISHED BY: Schmitt	COMPANY: MWH	DATE: 6/6/07	TIME: 1:00	RECEIVED BY: [Signature]	COMPANY: STL	DATE: 6/6/07	TIME: 1:30
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
- Plastic
 - VOA Vial
 - Sterile Plastic
 - Amber Glass
 - Widemouth Glass
 - Other

- Preservative Key**
- HCl, Cool to 4°
 - H2SO4, Cool to 4°
 - HNO3, Cool to 4°
 - NaOH, Cool to 4°
 - NaOH/Zn, Cool to 4°
 - Cool to 4°
 - None

COMMENTS

Date Received **6/6/07**

Courier: **STL** Hand Delivered

Bill of Lading

Page 55 of 193 06/25/2007

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. POSYPAI / B. BROOKS
Company: MWH
Address: JOAAP
Phone: 815-423-6841
Fax:
E-Mail:

Bill To: SAME

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 500-4598

Package Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input type="radio"/>
Temperature °C of Cooler <u>4.3</u>	
Within Hold Time Yes <input checked="" type="radio"/> No <input type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>
pH Check OK Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>	Res Cl ₂ Check OK Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>
Sample Labels and COC Agree Yes <input checked="" type="radio"/> No <input type="radio"/> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	X	X	X	TSS	Refr #	# / Cook	Volume	Preserv
			Date	Time											
1		SPM4-EXCAVATION WATER	6/7/07	1200	W	G	X	X	X						

Additional Analyses / Remarks

2 DAY TAT

WO: 023

BOA: 4016

RELINQUISHED BY S. POSYPAI COMPANY MWH DATE 6/7/07 TIME

RECEIVED BY [Signature] COMPANY STL DATE 6/7/07 TIME 1515

Matrix Key

WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air

SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O =

Container Key

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key

1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received 6/7/07

Courier: STL Hand Delivered

Bill of Lading

Page 32 of 105 06/28/2007

**SEVERN
TRENT
STL**

STL Chicago POST
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. Pasypal / B. Brooks **Bill To:** SAHE **Shaded Areas For Internal Use Only** 2 of 2

Contact: S. Pasypal / B. Brooks Contact: _____
 Company: MWH Company: _____
 Address: JAAA Address: _____
 Phone: 815-423-6641 Phone: _____
 Fax: _____ Fax: _____
 E-Mail: _____ PO#: _____ Quote: _____

Lab Lot# 500-4599

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>NA</u>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <u>NA</u>	Res Cl, Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>NA</u>
Sample labels and CDC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CDC not present	

Sampler Name:		Signature:		Refrig #		# / Cont.		Volume		Preserv		Matrix		Comp/Grab		Additional Analyses / Remarks	
Project Name:		Project Number:		Date Required		Hard Copy:		Fax:		Matrix		Comp/Grab		Additional Analyses / Remarks			
Project Location:		Date Required		Hard Copy:		Fax:		Matrix		Comp/Grab		Additional Analyses / Remarks					
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp	Grab	8330	TDPL								
13		JPWR23 67-2W-40	6/7/07	916	S	C	X	X									5 DAY TAT
14		↓ 8D ↓	↓	925	S	C	X	X									WD: 021
																	BOA: 4066

RELINQUISHED BY [Signature] COMPANY MWH DATE 6/7/07 TIME 1600 RECEIVED BY [Signature] COMPANY SR DATE 6-7-07 TIME 1500

RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____ RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - l = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: / /

Courier: Hand Delivered

Bill of Lading

Page 46 of 154 06/26/2007

**SEVERN
TRENT** **STL**

STL Chicago **POST**
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. RISHY PAI R. B. BUCKS
Contact: _____
Company: MWPL
Address: JOAAP
Phone: 815-423-6841
Fax: _____
E-Mail: _____

Bill To: SAM HE
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only 1 of 2
Lab Lot# 500-4602
Package Sealed Yes No
Samples Sealed Yes No
Received on Ice Yes No
Samples Intact Yes No
Temperature °C of Cooler 4.2
Within Hold Time Yes No
Preserv. Indicated Yes No NA
pH Check OK Yes No NA
Rev Cl₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No
COC not present

Sampler Name: RYAN YOUNG
Signature: [Signature]
Project Name: JOAAP BID
Project Number: _____
Project Location: _____
Lab PM: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	8330		TOTAL PL
			Date	Time					
1		JPWR368-2E-1	6/7/07	1600	C	C	Y	X	
2		3		1005			Y	Y	
3		4		1010			X	Y	
4		6		1015			X	Y	
5		7		1020			X	Y	
6		8		1025			X	Y	
7		9		1030			X	Y	
8		11		1035			X	Y	
9		12		1040			X	Y	
10		13		1045			X	Y	
11		15		1050			X	Y	
12		16		1055			Y	Y	

Additional Analyses / Remarks
5 DAY TAT
WO. OZ1
BOA: 4016

RELINQUISHED BY: [Signature] **COMPANY:** MWPL **DATE:** 6/7/07 **TIME:** 1600

RECEIVED BY: [Signature] **COMPANY:** [Signature] **DATE:** 6/7/07 **TIME:** 015

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Wipe
 - O = _____
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 6/7/07

Courier: [Signature] Hand Delivered

Bill of Lading

Page 42 of 141 06/26/2007

**SEVERN
TRENT** **STL**

STL Chicago **POST**
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. Rusy PAI / B. Brooks
Contact: MWH
Company: MWH
Address: JOAAP
Phone: 815 423-6841
E-Mail:

Bill To: SAME
Contact:
Company:
Address:
Phone:
Fax:
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only 2 of 2
Lab Lot# 500-4602
Package Sealed Yes No
Samples Sealed Yes No
Received on Ice Yes No
Samples Intact Yes No
Temperature °C of Cooler

Sampler Name:		Signature:		Refrg #															
RYAN YOUNG		[Signature]		# / Cont.															
Project Name:		Project Number:		Volume															
JOAAP BID				Preserv															
Project Location:		Date Required		Matrix	Comp/Grab														
Lab PM:		Hard Copy:																	
Laboratory ID	MS-MSD	Client Sample ID		Date	Time														
B		JPNR 368-ZE-9-D		6/7/07	1030	S	C	X	X										
14		12-D		↓	1040	S	C	X	X										

Within Hold Time Yes No
Preserv. Indicated Yes No NA
pH Check OK Yes No NA
Res Cl₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No
COC not present

Additional Analyses / Remarks
5 DAY TAT
WD: 021
BDA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 6/7/07 TIME 1600

RECEIVED BY [Signature] COMPANY sn DATE 6/7/07 TIME 1515

Matrix Key
WW = Wastewater
W = Water
S = So
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WL = Wipe
O =

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received 6, 7, 07
Courier: sn **Hand Delivered**
Bill of Lading

06/26/2007 Page 13 of 141

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-4602

Client: JMAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-14	digester to ICP	Lia Peebles	T. Chen	6/11/07	1500	
1-14	ICP	TC Chen	Mr S-GH	6/14/07	13:40	

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-4602

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-14	Metals	Jodie Brackon	Lisa Reeths	6/11/07	1750	
1-14	Metals	Lisa Reeths	Jodie Brackon	6/11/07	1110	
1-14	8330	Jodie Brackon	Jodie Brackon	6/7/07	2000	
1-04	8330	Jodie Brackon	Jodie Brackon	6/7/07	2100	

SEVERN TRENT STL

STL Chicago LOC: 060807
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. ROSYPAL / B. BROOKS
Company: MWLL
Address: JODAN
Phone: 815-423-6841
Fax:
E-Mail:

Bill To: SAME
Company:
Address:
Phone:
Fax:
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only 2 of 1

Lab Lot# 500-4630

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler 2.8	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cd	Cu	Zn	Ag	As
			Date	Time								
1		JPL2-SP12 (0.5)	6/2/07	1160	S	G	X	X	X	X	X	X
2		SP13 (0.5)		1105			X	X	X	X	X	X
3		SP14 (0.5)		1110			X	X	X	X	X	X
4		SP15 (0.5)		1105			X	X	X	X	X	X
5		SP16 (0.5)		1120			X	X	X	X	X	X

Additional Analyses / Remarks

2 DAY TAT

NO: 023

BOA: 4016

RELINQUISHED BY: <u>[Signature]</u> COMPANY: MWLL DATE: 6/8/07 TIME: 1400	RECEIVED BY: <u>[Signature]</u> COMPANY: STL DATE: 6/8/07 TIME: 1400
RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____	RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Sp'd
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 26 / 05 / 07

Courier: _____ **Hand Delivered**

Bill of Lading [Signature]

06/27/2007 page 50 of 100

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-4630-

Client: JDRPP

06/27/2007

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-5 1-5	digestion to ICP ICP	Joe Paeble T. Cu	T. Cu P25-177	6/14/07 6/14/07	1500 15:00	

Page 51 of 185

STL Chicago
2417 Bond Street **POST**
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. Bosypa / B. Brooks
Company: MWH
Address: JOANN
Phone: 815-423-6844
E-Mail:

Bill To: SAME

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 2 of 2

Lab Lot# 500-4661

Package Sealed Yes <input checked="" type="checkbox"/> No	Samples Sealed Yes <input checked="" type="checkbox"/> No
Received on Ice Yes <input checked="" type="checkbox"/> No	Samples Intact Yes <input checked="" type="checkbox"/> No
Temperature °C of Cooler <u>4.5</u>	

Sampler Name: <u>RYAN YOUNG</u>	Signature: <u>[Signature]</u>	Refrig #																		
Project Name: <u>JOANN B10</u>	Project Number:	Volume																		
Project Location:	Date Required	Preserv																		
Lab PM:	Hard Copy: <u> </u>	Matrix																		
	Fax: <u> </u>	Comp/Grab																		

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab														
<u>13</u>		<u>JPWR 369-1W-5-D</u>	<u>6/11/07</u>	<u>915</u>		<u>0830</u>	<u>XX</u>	<u>RF</u>												
<u>14</u>		<u>↓ 14-D ↓</u>	<u>↓</u>	<u>950</u>			<u>XX</u>	<u>XX</u>												

Within Hold Time Yes <input checked="" type="checkbox"/> No	Preserv. Indicated Yes No <u>NA</u>
pH Check OK Yes No <u>NA</u>	Res Cl ₂ Check OK Yes No <u>NA</u>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <u>COC not present</u>	
Additional Analyses / Remarks	

5 DAY TAT
WO: 021
BDA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 6/11/07 TIME 1400

RECEIVED BY [Signature] COMPANY SR DATE 6/11/07 TIME 1425

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O =

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received
 Courier: Hand Delivered
 Bill of Lading

06/27/2007 page 47 of 147

SIL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-4661

Client: JOAAP

06/27/2007

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-14	digestion + ICP	Jim Paebbs	T. Sm	6/12/07	1500	
1-14	ICP	T. Sm	Mr. S. 174	6/14/07	12:00	

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STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. ROSY PAI / B. BROOKS
 Contact: _____
 Company: MWH
 Address: JOANN
 Phone: 815-423-6844
 Fax: _____
 E-Mail: _____

Bill To: SAME
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 2

Lab Lot# 500-4662

Package Sealed <u>Yes</u> No	Samples Sealed Yes <u>No</u>
Received on Ice <u>Yes</u> No	Samples Intact <u>Yes</u> No
Temperature °C of Cooler <u>4.5</u>	
Within Hold Time <u>Yes</u> No	Preserv. Indicated Yes No <u>NA</u>
pH Check OK <u>Yes</u> No <u>NA</u>	Res Cl ₂ Check OK Yes No <u>NA</u>
Sample Labels and COC Agree <u>Yes</u> No COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	8330	P1	Refrg #	# / Cont.	Volume	Preserv
			Date	Time								
1		JPWR370-1E-2	6/11/02	1400	S	C	X	X				
2				1005			X	X				
3				1010			X	X				
4				1015			X	X				
5				1020			X	X				
6				1025			X	X				
7				1030			X	X				
8				1035			X	X				
9				1040			X	X				
10				1045			X	X				
11				1050			X	X				
12				1055			X	X				

Additional Analyses / Remarks

5 DAY TAT

WD: 021

BDA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 6/11/02 TIME: 1400 RECEIVED BY: [Signature] COMPANY: SPT DATE: 6/11/02 TIME: 0930

Matrix Key

WW = Wastewater
 W = Water
 S = Sol
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air

SE = Sediment
 SO = Solid
 DS = Drum Liquid
 DL = Drum Liquid
 L = Leachate
 W = Wipe
 O =

Container Key

- Plastic
- VOA Vial
- Sterile Plastic
- Amber Glass
- Widemouth Glass
- Other

Preservative Key

- HCl, Cool to 4°
- H2SO4, Cool to 4°
- HNO3, Cool to 4°
- NaOH, Cool to 4°
- NaOH/Zn, Cool to 4°
- Cool to 4°
- None

COMMENTS

Date Received _____

Courier: STL Hand Delivered

Bill of Lading _____

Page 49 of 169 06/27/2007

**SEVERN
TRENT
STL**

STL Chicago **POST**
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. Rosypal / B. Brooks
Contact: _____
Company: MWH
Address: JOANN

Phone: 815-423-6841
Fax: _____
E-Mail: _____

Bill To: JAMIE
Contact: _____
Company: _____
Address: _____

Phone: _____
Fax: _____
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only 2 of 2

Lab Lot# 500-4662

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.5</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name:	Signature:	Refr #	# / Cool.	Volume	Pressure	Matrix	Comp/Grab	Sampling		Additional Analyses / Remarks
								Date	Time	
<u>RYAN YOUNG</u>	<u>[Signature]</u>						<u>8330</u>			
<u>JOANN BLD</u>										
<u>13</u>								<u>4/11/07</u>	<u>1040</u>	<u>S DANTAS</u>
<u>14</u>								<u>15-0</u>	<u>1050</u>	<u>WO: DZ;</u>
										<u>BOA: 4016</u>

RELINQUISHED BY <u>[Signature]</u> COMPANY <u>MWH</u> DATE <u>6/11/07</u> TIME <u>1400</u>	RECEIVED BY <u>[Signature]</u> COMPANY <u>SR</u> DATE <u>6-11-07</u> TIME <u>1400</u>
RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____	RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Wipe
 - O = _____
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received _____

Courier: STL **Hand Delivered**

Bill of Lading _____

06/27/2007 Page 50 of 169

**SEVERN
TRENT
STL**

STL Chicago COC: 061207
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: _____ Bill To: SAME Shaded Areas For Internal Use Only 1 of 1

Contact: S. Rosypal / B. Brooks Contact: _____
Company: MW4 Company: _____
Address: JOGAN Address: _____
Phone: 815-423-6841 Phone: _____
Fax: _____ Fax: _____
E-Mail: _____ PO#: _____ Quote: _____

Lab Lot# 500-4685

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name:		Signature:		Refry #															
Project Name:		Project Number:		# / Cont.		Volume		Preserv											
Project Location:		Date Required		Matrix		Comp/Grab													
Lab PIN:		Hard Copy:																	
Laboratory ID	MS-MSD	Client Sample ID	Date	Time	Matrix	Comp/Grab													
1		JPL5-AP1 (0.5)	6/12/07	1100	S	G	X	X	X										
2		AP2 (0.5)		1105			X	X	X										
3		AP3 (0.5)		1110			X	X	X										
4		AP4 (0.5)		1115			X	X	X										
5		AF1 (1)		1120			X	X	X										
6		AF2 (1)		1125			X	X	X										
7		AF3 (1)		1130			X	X	X										
8		JPL5-AF3 (1) - D	6/12/07	1130	S	G	X	X	X										

Additional Analyses / Remarks

2 DAY TAF

WD: 023

BOA: 4016

RELINQUISHED BY: <u>[Signature]</u> COMPANY: <u>MW4</u> DATE: <u>6/12/07</u> TIME: <u>1400</u>	RECEIVED BY: <u>[Signature]</u> COMPANY: <u>STL</u> DATE: <u>6/12/07</u> TIME: <u>1700</u>
RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____	RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - Sl = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O = _____
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 6/12/07

Courier: STL Hand Delivered

Bill of Lading

06/27/2007 Page 56 of 230

SEVERN TRENT STL

STL Chicago COC: 061607
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Casey PM / B Brooks BH To: SAME Shaded Areas For Internal Use Only 1 of 1

Contact: S. Casey PM / B Brooks Contact: _____
 Company: MWH Company: _____
 Address: J0000 Address: _____
 Phone: 815-423-6841 Phone: _____
 Fax: _____ Fax: _____
 E-Mail: _____ PO#: _____ Quote: _____

Lab Lot# 500-4792

Package Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Received on ice Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature °C of Cooler <u>4.4</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res. Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> COC not present	

Sampler Name: RUAN YOUNG Signature: [Signature] Refrig # _____
 Project Name: LAD Project Number: _____ # / Cont: _____
 Project Location: _____ Date Required: _____ Volume: _____
 Lab PM: _____ Hard Copy: _____ Preserv: _____
 Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCB		Pb	
			Date	Time			X	Y	X	Y
1		JPLS-AP1 (0.5)	6/18/07	1200	S	G	X	X		
2		AP2 (0.5)		1205			X	X		
3		AP3 (0.5)		1210			X	X		
4		AP4 (0.5)		1215			X	X		
5		AF1 (3)		1220			X	X		
6		AP2 (3)		1225			X	X		
7		AF3 (3)		1230			X	X		
8		AP4 (3)		1235			X	X		

Additional Analyses / Remarks

5 DAY TAT

W0: 023

BOA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 6/18/07 TIME 1640 RECEIVED BY [Signature] COMPANY STL DATE 6/18/07 TIME 1500

RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____ RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O = _____
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 6/18/07

Courier: STL Hand Delivered

Bill of Lading

**SEVERN
TRENT**

STL

STL Chicago LOC: 061907
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. P. SYPARI / B. BROOKS
Company: MWH
Address: 10000
Phone: 815-423-6844
Fax:
E-Mail:

Bill To: SAME
Contact:
Company:
Address:
Phone:
Fax:
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 500-4814

Package Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Sealed Yes <input type="radio"/> No <input checked="" type="radio"/>
Received on ice Yes <input type="radio"/> No <input checked="" type="radio"/>	Samples Intact Yes <input type="radio"/> No <input checked="" type="radio"/>
Temperature °C of Cooler 44	
Within Hold Time Yes <input type="radio"/> No <input checked="" type="radio"/>	Preserv. Indicated Yes <input type="radio"/> No <input checked="" type="radio"/> NA
pH Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA	Res Cl₂ Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA
Sample Labels and COC Agree Yes <input type="radio"/> No <input checked="" type="radio"/> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Refr. #	# / Cont.	Volans	Preserv	Date Required	Hard Copy	Fax	Sampler Name	Signature	Project Name	Project Number	Project Location	Lab PM
			Date	Time																
1		JPM4-AF4 (.)	6/19/07	900	S	G	X								RYAN YOUNG	[Signature]	LAP SOL			
2		AF5 (.)		905			Y													
3		AF6 (.)		910			Y													
4		AP4 (0.5)		915			Y													
5		AP5 (0.5)		920			X													
6		AP6 (0.5)		925			Y													
7		AP7 (0.5)		930			Y													

Additional Analyses / Remarks

2 DAY TRAF

WD: 023

BDA: 401L

RELINQUISHED BY [Signature]	COMPANY MWH	DATE 6/19/07	TIME 1600	RECEIVED BY [Signature]	COMPANY SR	DATE 6/19/07	TIME 1525
RELINQUISHED BY [Signature]	COMPANY	DATE	TIME	RECEIVED BY [Signature]	COMPANY	DATE	TIME

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
- Plastic
 - VDA Vial
 - Sterile Plastic
 - Amber Glass
 - Widemouth Glass
 - Other
- Preservative Key**
- HCl, Cool to 4°
 - H2SO4, Cool to 4°
 - HNO3, Cool to 4°
 - NaOH, Cool to 4°
 - NaOH/Zn, Cool to 4°
 - Cool to 4°
 - None

COMMENTS

Date Received 6/19/07

Courier: SR Hand Delivered

Bill of Lading

06/19/2007
page 34 of 109

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-4814

Client: JOAIP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-7	digestion to ICP ICP	Lisa Paetles	T. Sun	6/21/07	1500	
1-7			Paul 137	6/22/07	10.00	

SEVERN TRENT STL

STL Chicago Loc: 062107
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Sygal / B Brooks
 Contact: _____
 Company: MWR
 Address: JLAP
 Phone: 815-423 6841
 Fax: _____
 E-Mail: _____

Bill To: same
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only C of 1

Lab Lot# 500-4870

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	Res Cl ₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name: RYAN YOUNG Signature: [Signature] Refrg # _____
 Project Name: JLAP Project Number: _____ # / Cont. _____
 Project Location: _____ Date Required _____ Volume _____
 Lab PM: _____ Hard Copy: _____ Fax: _____ Preserv _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Plb															
			Date	Time																		
1		JPLS-AF5(3)	6/21/07	1200	S	G	Y															
2		AF 6 (3)		1205			Y															
3		AF 7 (3)		1210			Y															
4		AF 8 (3)		1215			Y															
5		AP5 (0.5)		1220			Y															
6		AP6 (0.5)		1225			Y															
7		AP7 (0.5)		1230			Y															
8		AP8 (0.5)		1235			Y															
9		AP9 (0.5)		1240			Y															
10		AP9 (0.5)D		1240			Y															

Additional Analyses / Remarks

2 DAY TR
 WD: 023
 BOA: 4016

RELINQUISHED BY [Signature] COMPANY MWR DATE 6/21/07 TIME 1400 RECEIVED BY [Signature] COMPANY SL DATE 6/21/07 TIME 1605
 RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____ RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
 WW = Wastewater SE = Sediment
 W = Water SO = Solid
 S = Soil DS = Drum Solid
 SL = Sludge DL = Drum Liquid
 MS = Miscellaneous L = Leachate
 OL = Oil WI = Wipe
 A = Air O = _____
- Container Key**
 1. Plastic
 2. VDA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth: Glass
 6. Other
- Preservative Key**
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received _____
 Courier: SL Hand Delivered
 Bill of Lading _____

**SEVERN
TRENT
STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact: S. Rypa / B. Brooks
Company: MWH
Address: Joan
Phone: 815-423-6841
Fax:
E-Mail:

Bill To: CAME
Contact:
Company:
Address:
Phone:
Fax:
PO#: _____ Quote: _____

Shaded Areas For Internal Use Only of 2

Lab Lot# 500-4954

Package Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.7</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name: RYAN YOUNG **Signature:** [Signature]
Project Name: LAP SOIL **Project Number:** _____
Project Location: _____ **Date Required:** _____
Lab PM: _____ **Hard Copy:** _____ **Fax:** _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCB	Pb												
			Date	Time																
1		JPLE - 1 (3)	6/26/07	1000	S	C	X	X												
2		2 (3)		1005			X	X												
3		3 (3)		1010			X	X												
4		4 (3)		1015			X	X												
5		5 (3)		1020			X	X												
6		6 (3)		1025			X	X												
7		7 (3)		1030			X	X												
8		8 (3)		1035			X	X												
9		9 (3)		1040			X	X												
10		10 (3)		1045			X	X												
11		11 (3)		1050			X	X												
12		12 (3)		1055			X	X												

Additional Analyses / Remarks
2 DAY TAT
WO: 023
BOA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 6/26/07 TIME 1400

RECEIVED BY [Signature] COMPANY src DATE 6/26/07 TIME 14:01

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - DL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 6/26/07

Courier: src **Hand Delivered**

Bill of Lading

**SEVERN
TRENT STL**

STL Chicago LIC. 0626073
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. RAYPAI / B BROOKS
 Company: MWH
 Address: JOAN
 Phone: 815-423-6841
 Fax:
 E-Mail:

Billing To: SAME

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only 2 of 2

Lab Lot# <u>500-4954</u>	
Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. Indicated Yes No NA
pH Check OK Yes No NA	Res Cl ₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No COC not present	

Sampler Name: RYAN YOUNG Signature: [Signature]
 Project Name: LAP SOIL Project Number:
 Project Location: Date Required
 Lab PIN: Hard Copy:
 Fax:

Refr #	# / Comp	Volume	Preserv

Laboratory ID	MSMSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCB	Pb
			Date	Time				
<u>13</u>		<u>JPLS -13 (D)</u>	<u>6/24/07</u>	<u>1100</u>	<u>S</u>	<u>C</u>	<u>X</u>	<u>X</u>
<u>14</u>		<u>W 10-D(3)</u>	<u>↓</u>	<u>1045</u>	<u>S</u>	<u>C</u>	<u>X</u>	<u>X</u>

Additional Analyses / Remarks
2 DAY TAT
WD: 023
BOA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 6/26/07 TIME 1400
 RELINQUISHED BY COMPANY DATE TIME

RECEIVED BY [Signature] COMPANY STL DATE 6/26/07 TIME 14:01
 RECEIVED BY COMPANY DATE TIME

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SQ = Solid
 - DS = Drum Liquid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Wipe
 - O =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 6, 26, 07
 Courier: SR Hand Delivered
 Bill of Lading

SEVERN TRENT STL

STL Chicago
 2417 Bond Street: McC. 070207
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. ANSLEY PA1 / B. B. ROBERTS **Bill To:** SAM E **Shaded Areas For Internal Use Only** 1 of 1

Contact: S. ANSLEY PA1 / B. B. ROBERTS Contact: _____
 Company: MWH Company: _____
 Address: JOANN Address: _____
 Phone: 815-423-6201 Phone: _____
 Fax: _____ Fax: _____
 E-Mail: _____ PO#: _____ Quote: _____

Lab Lot# 500-5055

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>3.5</u>	

Sampler Name: RYAN / UNS **Signature:**

Project Name: LAP **Project Number:** _____

Project Location: _____ **Date Required:** _____

Lab PM: _____ **Hard Copy:** **Fax:**

Ref #																			
# / Cont.																			
Volume																			
Preserv.																			

Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	pesticides	phosphates												Additional Analyses / Remarks
			Date	Time																
1		JPL3-BARREL - WHITE SUBSTANCE	7/2/07	1200	SO	G	√	√												2 DAY TAT - PHOS. 5 DAY TAT - pesticides WD: 023 BDA: 4016

RELINQUISHED BY	COMPANY <u>MWH</u>	DATE <u>7/2/07</u>	TIME <u>1600</u>	RECEIVED BY	COMPANY <u>SRL</u>	DATE <u>7/2/07</u>	TIME <u>1511</u>
RELINQUISHED BY _____	COMPANY _____	DATE _____	TIME _____	RECEIVED BY _____	COMPANY _____	DATE _____	TIME _____

- | | | |
|--|---|---|
| Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = O-
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____ | Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other | Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None |
|--|---|---|

COMMENTS

Date Received 07, 02, 07

Courier: Hand Delivered

Bill of Lading KL

07/24/2007
 Page 51 of 51

**SEVERN
TRENT
STL**

STL Chicago (WC: 070907)
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: _____ **Bill To:** SAME **Shaded Areas For Internal Use Only** 1 of 1

Contact: S. Rosypan BBROOKS Contact: _____
Company: MWH Company: _____
Address: 1000 Address: _____
Phone: 815-423-6841 Phone: _____
Fax: _____ Fax: _____
E-Mail: _____ PO#: _____ Quote: _____

Lab Lot# 500-5122

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No

Temperature °C of Cooler
3.2

Within Hold Time Yes No	Preserv. Indicated Yes No NA
pH Check OK Yes No NA	Res Cl₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	PbTCLP	Refrg #	# / Cont.	Volume	Preserv
			Date	Time								
1		JPM4-AE7(1)	7/9/07	1200	S	G	X	Y				
2		API1 (0.5)		1205			X	Y				
3		API2 (0.5)		1210			X	Y				
4		API3 (0.5)		1215			Y	Y				
5		API4 (0.5)		1220			Y	Y				

Additional Analyses / Remarks

2 DAY TAG

WD: 023

BDA: 4016

RELINQUISHED BY: <u>[Signature]</u> COMPANY: <u>MWH</u> DATE: <u>7/9/07</u> TIME: <u>1400</u>	RECEIVED BY: <u>[Signature]</u> COMPANY: <u>SOC</u> DATE: <u>7/9/07</u> TIME: <u>14:30</u>
RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____	RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - D =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 07/09/07

Courier: _____ Hand Delivered

Bill of Lading [Signature]

SEVERN TRENT STL

STL Chicago **COL: 071307**
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. Rysypal / B Brooks
 Company: MWH
 Address: 10000
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To: same

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 500-5265

Package Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Temperatures °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> COC not present	

Sampler Name: RYAN YOUNG Signature: [Signature]
 Project Name: LAPSDIL Project Number: _____
 Project Location: _____ Date Required: _____
 Lab PM: _____ Hard Copy: _____
 Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	PCN	Zn	As	Cu	MALLIUM	PCB	Additional Analyses / Remarks
			Date	Time										
1		JPLS-PCN-1 (3)	7/13/07	1000	S	C	X	X	X	X	X	X	X	2 DAY TAT
2		2 (3)		1005			X	X	X	X	X	X	X	
3		3 (3)		1010			X	X	X	X	X	X	X	WID: 023
4		4 (3)		1015			X	X	X	X	X	X	X	
5		5 (3)		1020			X	X	X	X	X	X	X	BDA: 4016
6		6 (3)		1025			X	X	X	X	X	X	X	
7		7 (3)		1030			X	X	X	X	X	X	X	
8		8 (3)		1035			X	X	X	X	X	X	X	
9		9 (3)		1040			X	X	X	X	X	X	X	
10		10 (3)		1045			X	X	X	X	X	X	X	

RELINQUISHED BY: <u>[Signature]</u> COMPANY: <u>MWH</u> DATE: <u>7/13/07</u> TIME: <u>1400</u>	RECEIVED BY: <u>[Signature]</u> COMPANY: <u>SR/TA</u> DATE: <u>7/13/07</u> TIME: <u>15:06</u>
RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____	RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = O.
 A = Air
 SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O = _____

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 7.13.07
 Courier: SR Hand Delivered
 Bill of Lading

0772672007
Page 41 of 127

**SEVERN
TRENT**

STL

STL Chicago COC: 071607
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. Pasyral B. Brooks
 Company: MWH
 Address: JOPAP
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To: SAME

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 2

Lab Lot# 500-5285

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>2.5</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present <input type="checkbox"/>	

Sampler Name: Ryan Young **Signature:** [Signature]

Project Name: LAP SOLL **Project Number:** _____

Project Location: _____ **Date Required:** _____

Lab PIR: _____ **Hard Copy:** ___ **Fax:** ___

Laboratory ID	MS/MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCN	Pb														
			Date	Time																		
1		JPL5-PCN-11 (3)	7/16/07	900	S	C	X	X														
2		12 (3)		905			X	X														
3		13 (3)		910			X	X														
4		14 (3)		915			X	X														
5		15 (3)		920			X	X														
6		16 (3)		925			X	X														
7		17 (3)		930			X	X														
8		18 (3)		935			X	X														
9		19 (3)		940			X	X														
10		20 (3)		945			X	X														
11		21 (3)		950			X	X														
12		22 (3)		955			X	X														

Additional Analyses / Remarks

2 DAY TAT

WD: 023

BOAL4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 7/16/07 TIME 1600

RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____

RECEIVED BY [Signature] COMPANY STL DATE 7/16/07 TIME 1530

RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solks
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = W-ve
 - O = _____

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 1/1

Courier: STL Hand Delivered

Bill of Lading _____

07/27/2007 Page 47 of 151

**SEVERN
TRENT**

STL

STL Chicago LOC: 671607
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. Rossy, par Q. B. Brooks
Company: MWH
Address: 40AMP
Phone: 615-423641
Fax:
E-Mail:

Bill To: S. M. B.

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only of

Lab Lot# 500-5285
Package Sealed: Yes No
Samples Sealed: Yes No
Received on Ice: Yes No
Samples Intact: Yes No
Temperature °C of Cooler: 2.3

Sampler Name:		Signature:		Refr. #											Within Hold Time	Preserv. Indicated							
<u>RYAN YOUNG</u>		<u>[Signature]</u>		# / Cont.											Yes <input checked="" type="radio"/> No <input type="radio"/>	Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>							
Project Name:		Project Number:		Volume											pH Check OK		Res Cl ₂ Check OK						
<u>LAPSOEL</u>				Preserv											Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>	Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>							
Project Location:		Date Required		Matrix	Comp/Grab											Sample Labels and COC Agree							
Lab PM:		Hard Copy: <u> </u> Fax: <u> </u>														Yes <input checked="" type="radio"/> No <input type="radio"/>	COC not present						
Laboratory ID	MS-MSD	Client Sample ID		Sampling Date Time		Matrix	Comp/Grab	PCN	Pb											Additional Analyses / Remarks			
<u>13</u>		<u>JPLS-PCN-23 (3)</u>		<u>7/16/07</u>	<u>1000</u>	<u>S</u>	<u>C</u>	<u>X</u>	<u>X</u>											<u>2 DAY TAR</u>			
<u>14</u>		<u>24 (2)</u>		<u>↓</u>	<u>1005</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>X</u>														
<u>15</u>		<u>25 (3)</u>		<u>↓</u>	<u>1000</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>X</u>											<u>WU: 023</u>			
																				<u>BOA: 4016</u>			

RELINQUISHED BY [Signature] COMPANY MWH DATE 7/16/07 TIME 1600 RECEIVED BY [Signature] COMPANY STL DATE 7/16/07 TIME 1530

Matrix Key
 WW = Wastewater
 W = Water
 S = So-
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WL = Wipe
 O =

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received / /
 Courier: Hand Delivered
 Bill of Lading

Page 48 of 151 07/17/2007

**SEVERN
TRENT**

STL

STL Chicago
2417 Bond Street **COC: 071607B**
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. Essy par B. Brooks
Company: Smith
Address: Jansy
Phone: 815-423-6641
Fax:
E-Mail:

Bill To: SAME

Contact:
Company:
Address:
Phone:
Fax:
PO#: _____ Quote: _____

Shaded Areas For Internal Use Only of

Lab Lot# 500-5286

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature °C of Cooler <u>2.5</u>	
Within Hold Time Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>NA</u>
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>NA</u>	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>NA</u>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name: <u>Ryan Young</u>	Signature: <u>[Signature]</u>	Refr #																		
Project Name: <u>LAP SOL</u>	Project Number: <u>[Signature]</u>	# / Cont.																		
Project Location:	Date Required	Volume																		
Lab PM:	Hard Copy: <u> </u> <u> </u> <u> </u>	Preserv																		

Laboratory ID	MS/MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Pb Total	Additional Analyses / Remarks										
			Date	Time															
1		JPM4-API5 (0.5)	7/14/07	1200	S	S	X	X	2 DAY TAG										
2		API6 (0.5)		1205			X	X											
3		API7 (0.5)		1216			X	X	WO: 023										
4		API8 (0.5)		1215			X	X											
5		API9 (0.5)		1220			X	X	BDA=4011										
6		API20 (0.5)		1225			X	X											

RELINQUISHED BY <u>[Signature]</u> COMPANY <u>MWH</u> DATE <u>7/16/07</u> TIME <u>1500</u>	RECEIVED BY <u>[Signature]</u> COMPANY <u>STL</u> DATE <u>7/16/07</u> TIME <u>1530</u>
RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____	RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Sol
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O = _____
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received _____

Courier: STL Hand Delivered

Bill of Lading _____

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-5347

Client: MWIT

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-4	metals	Jodie Brockton	Lisa Peelle	7/19/07	0740	
1-4	metals	Lisa Peelle	Jodie Brockton	7/19/07	0950	

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. WISYPAI / B. B. MOORE
Company: MWH
Address: JOAN
Phone: 815-423-6211
Fax:
E-Mail:

Bill To: SAME

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 560-5055-2

Package Sealed <input checked="" type="radio"/> Yes <input type="radio"/> No	Samples Sealed <input checked="" type="radio"/> Yes <input type="radio"/> No
Received on Ice <input checked="" type="radio"/> Yes <input type="radio"/> No	Samples Intact <input checked="" type="radio"/> Yes <input type="radio"/> No
Temperature °C of Cooler <u>3.5</u>	
Within Hold Time <input checked="" type="radio"/> Yes <input type="radio"/> No	Preserv. Indicated <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA
pH Check OK <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA	Res Cl, Check OK <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA
Sample Labels and COC Agree <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> COC not present	

Sampler Name: RYAN YOUNG
Signature: [Signature]
Project Name: LAP
Project Number:
Project Location:
Lab P#: Hard Copy: Fax:

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	pesticides	phosphates										
			Date	Time														
1		JPL3-BARREL - WHITE SUBSTANCE	7/2/07	1200	SO	G	✓	✓										

Additional Analyses / Remarks
2 DAY RM - PHOS.
5 DAY IAT - pesticides
WD-023
BOA: 4016

RELINQUISHED BY: <u>[Signature]</u> COMPANY: <u>MWH</u> DATE: <u>7/2/07</u> TIME: <u>1640</u>	RECEIVED BY: <u>[Signature]</u> COMPANY: <u>STC</u> DATE: <u>7/2/07</u> TIME: <u>1511</u>
RELINQUISHED BY: COMPANY: DATE: TIME:	RECEIVED BY: COMPANY: DATE: TIME:

- Matrix Key**
- WW - Wastewater
 - W - Water
 - S - Soil
 - SL - Sludge
 - MS - Miscellaneous
 - OL - Oil
 - A - Air
 - SE - Sediment
 - SD - Solid
 - DS - Drum Solid
 - DL - Drum Liquid
 - L - Leachate
 - WL - Wipe
 - O -
- Container Key**
- 1 - Plastic
 - 2 - 20L Metal
 - 3 - Sterile Plastic
 - 4 - Amber Glass
 - 5 - Sterile Glass
 - 6 - Other
- Preservative Key**
- 1 - HC - Cool to 4°
 - 2 - H2SO4 - Cool to 4°
 - 3 - HNO3 - Cool to 4°
 - 4 - NaOH - Cool to 4°
 - 5 - NaOH - Cool to 4°
 - 6 - Other

COMMENTS

Date Received 07/02/07

Courier: Hand Delivered [Signature]

Bill of Lading

**SEVERN
TRENT** **STL**

STL Chicago (708) 534-5200
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. RUSSELL / B BOOKS
Company: MWH
Address: DOA-P
Phone: 812-422-6244
Fax:
E-Mail:

Bill To: SEMI

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only of

Lab Lot# 500-5425

Package Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Sealed Yes <input type="radio"/> No <input checked="" type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input type="radio"/>

Temperature °C of Cooler
4.2

Sampler Name: RYAN YOUNG Signature: [Signature]
Project Name: LAP SOIL Project Number:
Project Location: Date Required: Hard Copy: Fax:
Lab PM: Fax:

Within Hold Time
Yes No

Preserv. Indicated
Yes No NA

pH Check OK
Yes No NA

Res Cl₂ Check OK
Yes No NA

Sample Labels and COC Agree
Yes No

COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCB	VOC (TCLP)	SVOC (TCLP)	PCDD-A METALS (TCLP)	DEACTIVITY	IGNITABILITY	832P	PAINT FILTER	Pesticides	CORROSIVITY	Additional Analyses / Remarks
			Date	Time													
1		JPLS-DITCH PROFILE	7/19/07	1100	S	C	X	X	X	X	X	X	X	X	X	X	2 DAY TURN WU: 02.3 ROA: 40.6

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 7/19/07 TIME: 1500
RECEIVED BY: [Signature] COMPANY: SA DATE: 7/19/07 TIME: 1500

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
- 1. Plastic
 - 2. VOA Vial
 - 3. Sterile Plastic
 - 4. Amber Glass
 - 5. Widemouth Glass
 - 6. Other
- Preservative Key**
- 1. HCl, Cool to 4°
 - 2. H2SO4, Cool to 4°
 - 3. HNO3, Cool to 4°
 - 4. NaOH, Cool to 4°
 - 5. NaOH/Zn, Cool to 4°
 - 6. Cool to 4°
 - 7. None

COMMENTS

Date Received 7/19/07
Courier: SM Hand Delivered
Bill of Lading

**SEVERN
TRENT
STL**

STL Chicago COC: 072307B
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: SP234PM / B BROOKS
 Contact: _____
 Company: MWH
 Address: 1000P
 Phone: 815-423-6241
 Fax: _____
 E-Mail: _____

Bill To: SAME
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 2 of 2
Lab Lot# 500-5499
 Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on Ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: 3.9
 Within Hold Time: Yes No
 Preserv. Indicated: Yes No NA
 pH Check OK: Yes No NA
 Res Cl₂ Check OK: Yes No NA
 Sample Labels and COC Agree: Yes No
 COC not present:

Sampler Name: RYAN YOUNG
Signature: *[Signature]*
Project Name: LAPSOL
Project Number: _____
Project Location: _____
Date Required: _____
Lab PM: _____
Hard Copy: _____
Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	TL	Cu	Zn	As	Cd	Ag	Sb	TPH
			Date	Time											
13		JPLC - AP22 (0.5)	7/23/07	1000	G	G	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	Y	AP23 (0.5)		1005			✓	✓	✓	✓	✓	✓	✓	✓	✓
15		AP24 (0.5)		1010			✓	✓	✓	✓	✓	✓	✓	✓	✓
16		AP25 (0.5)		1015			✓	✓	✓	✓	✓	✓	✓	✓	✓
17		AP26 (0.5)		1020			✓	✓	✓	✓	✓	✓	✓	✓	✓
18	X	AP27 (0.5)		1025			✓	✓	✓	✓	✓	✓	✓	✓	✓
19		AP28 (0.5)		1030			✓	✓	✓	✓	✓	✓	✓	✓	✓
20		AP29 (0.5)		1035			✓	✓	✓	✓	✓	✓	✓	✓	✓
21		AP30 (0.5)		1040			✓	✓	✓	✓	✓	✓	✓	✓	✓
22		AP31 (0.5)		1045			✓	✓	✓	✓	✓	✓	✓	✓	✓
23		AP32 (0.5)		1050			✓	✓	✓	✓	✓	✓	✓	✓	✓
24		AP33 (0.5)		1055			✓	✓	✓	✓	✓	✓	✓	✓	✓

Additional Analyses / Remarks
 2 DAY TAT
 WD: 023
 BDA: 4016

RELINQUISHED BY: *[Signature]* COMPANY: MWH DATE: 7/23/07 TIME: 1400

RECEIVED BY: *[Signature]* COMPANY: STL DATE: 7/23/07 TIME: 1330

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - G =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wadsworth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: _____
 Courier: STL Hand Delivered
 Bill of Lading: _____

Page 96 of 371

**SEVERN
TRENT
STL**

STL Chicago CO2072307C
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. R. Syta / B. Brooks
 Company: MWH
 Address: 10000
 Phone: 815-423-6441
 Fax:
 E-Mail:

Bill To: SAME

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only 2 of 9

Lab Lot# 500-5501

Package Sealed Yes No
 Samples Sealed Yes No

Received on Ice Yes No
 Samples Intact Yes No

Temperature °C of Cooler 3.9

Within Hold Time Yes No
 Preserv. Indicated Yes No NA

pH Check OK Yes No NA
 Res Cl₂ Check OK Yes No NA

Sample Labels and COC Agree Yes No
 COC not present

Sampler Name: RYAN YOUNG
 Signature: [Signature]
 Project Name: LAP SOIL
 Project Number:
 Project Location:
 Lab PM:
 Date Required
 Hard Copy:
 Fax:

Ref #	# / Cont.	Volume	Preserv

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	TL	Cu	Zn	As	Cd	Ag	Sb	TPH
			Date	Time											
1		JPLS-AP34 (0.5)	7/23/07	1100	S	G	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	X	AP35 (0.5)		1105			✓	✓	✓	✓	✓	✓	✓	✓	✓
3		AP36 (0.5)		1110			✓	✓	✓	✓	✓	✓	✓	✓	✓
4		AF9 (3)		1115			✓	✓	✓	✓	✓	✓	✓	✓	✓
5		AF10 (3)		1120			✓	✓	✓	✓	✓	✓	✓	✓	✓
6		AF11 (3)		1125			✓	✓	✓	✓	✓	✓	✓	✓	✓
7		AF12 (3)		1130			✓	✓	✓	✓	✓	✓	✓	✓	✓
8	X	AF13 (3)		1135			✓	✓	✓	✓	✓	✓	✓	✓	✓
9		AF14 (3)		1140			✓	✓	✓	✓	✓	✓	✓	✓	✓
10		AF15 (3)		1145			✓	✓	✓	✓	✓	✓	✓	✓	✓
11		AF16 (3)		1150			✓	✓	✓	✓	✓	✓	✓	✓	✓
12		AF17 (3)		1155			✓	✓	✓	✓	✓	✓	✓	✓	✓

Additional Analyses / Remarks

2 DAY TAT

WD: 023

BOA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 7/23/07 TIME 1400

RECEIVED BY [Signature] COMPANY STL DATE 7/23/07 TIME 1330

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sacment
 SO = Solid
 DS = Drum Solids
 DL = Drum Liquid
 L = Leachate
 WL = Wipe
 O =

Container Key
 1. Plastic
 2. YOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received
 Courier: STL Hand Delivered
 Bill of Lading

07/31/2007 Page 59 of 196

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report to: S. Rycyral / BB BOOKS
 Company: MWH
 Address: 10440
 Phone: 815-422-6441
 Fax: _____
 E-Mail: _____

Bill to: SAMPLE
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only

Lab Lot# 500-550

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>3.9</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>EA</u>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <u>NA</u>	Res Cl ₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>NA</u>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CDC not present	

Sampler Name: RYAN YOUNG Signature: [Signature]

Project Name: _____ Project Number: _____

Project Location: _____ Date Required: _____
 Lab PM: _____ Hard Copy: _____
 Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Tl	Cu	Zn	As	Ag	Cd	Sb	TPH
			Date	Time											
13		JPLE-AF18(3)	7/23/07	1200	S	G	✓	✓	✓	✓	✓	✓	✓	✓	✓
14		AF19(3)		1205			✓	✓	✓	✓	✓	✓	✓	✓	✓
15	X	AF20(3)		1210			✓	✓	✓	✓	✓	✓	✓	✓	✓
16		AF21(3)		1215			✓	✓	✓	✓	✓	✓	✓	✓	✓
17		AF20(3)-D		1210			✓	✓	✓	✓	✓	✓	✓	✓	✓
18		AF21(3)-D		1215			✓	✓	✓	✓	✓	✓	✓	✓	✓

Additional Analyses / Remarks

2 DAY TAP

WO: 023

BDA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 7/23/07 TIME: 1400

RECEIVED BY: [Signature] COMPANY: STL DATE: 7/23/07 TIME: 1330

Matrix Key

WW = Wastewater
 W = Water
 S = Scum
 SL = S ledge
 MS = Miscellaneous
 OL = Oil
 A = Air

SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O = _____

Container Key

1. Plastic
 2. VOA Via
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key

1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received _____

Courier: STL Hand Delivered

Bill of Lading _____

**SEVERN
TRENT** **STL**

STL Chicago (CC: 073007)
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S Posypa / B. Brooks
Contact: _____
Company: MWH
Address: JADA
Phone: 815-423-6841
Fax: _____
E-Mail: _____

Bill To: same
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1
Lab Lot# 500-5635
Package Sealed Yes No
Samples Sealed Yes No
Received on Ice Yes No
Samples Intact Yes No
Temperature °C of Cooler 3.6
Within Hold Time Yes No
Preserv. Indicated Yes No NA
pH Check OK Yes No NA
Res Cl₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No
COC not present
Additional Analyses / Remarks

Sampler Name:		Signature:		Entry #														
Project Name:		Project Number:		# / Cont.														
Project Location:		Date Required:		Volume														
Lab PM:		Hard Copy:		Preserv														
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	VOC	SVOC	PESTICIDES	PCB	PCRA & METALS							
1		JPL3-GEN FILL	7/30/07	1400	S	G	X	X	X	X	X							
2		JPL3-TOP SDIL	↓	1405	S	G	X	X	X	X	X							

08/24/2007
2 DAY TAT
WD: 023
BA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 7/30/07 TIME: 1430

RECEIVED BY: [Signature] COMPANY: TAL DATE: 7/30/07 TIME: 1500

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
Wi = Waste
O = _____

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received 7/30/07
Courier: TAL Hand Delivered
Bill of Lading

SEVERN TRENT STL

STL Chicago LOC: 073107
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: Contact: <u>S. ROSUPAI / B. Brooks</u> Company: <u>MWH</u> Address: <u>JOAN</u> Phone: <u>815-423-6241</u> Fax: _____ E-Mail: _____	Bill To: Contact: _____ Company: _____ Address: _____ Phone: _____ Fax: _____ PO#: _____ Quote: _____	Shaded Areas For Internal Use Only _____ of _____ Lab Lot# <u>500-5658</u> Package Sealed: Yes <input checked="" type="radio"/> No <input type="radio"/> Samples Sealed: Yes <input checked="" type="radio"/> No <input type="radio"/> Received on Ice: Yes <input checked="" type="radio"/> No <input type="radio"/> Samples Intact: Yes <input checked="" type="radio"/> No <input type="radio"/> Temperature °C of Cooler: <u>4.2</u> Within Hold Time: Yes <input checked="" type="radio"/> No <input type="radio"/> Preserv. Indicated: Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/> pH Check OK: Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/> Res Cl ₂ Check OK: Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/> Sample Labels and COC Agree: Yes <input checked="" type="radio"/> No <input type="radio"/> COC not present: <input type="checkbox"/>
---	--	--

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	TOTAL Pb	Pb TCLP	Refry #	# / Cont.	Volume	Preserv	Date Required	Hard Copy: <input type="checkbox"/>	Fax: <input type="checkbox"/>	Signature: <u>Ryan Young</u>	Project Name: <u>LAPSOIL</u>	Project Number: _____	Sampler Name: <u>RYAN YOUNG</u>
			Date	Time															
1		JPM4-AF8(4)	7/31/07	1100	S	G	Y	X											
2		↓ AF9(4)	↓	1105	S	G	X	X											
3		↓ AF10(4)	↓	1110	S	G	X	X											
Additional Analyses / Remarks																			
2 DAY TAT																			
WD: 023																			
BOA: 4016																			

RELINQUISHED BY: <u>[Signature]</u> COMPANY: <u>MWH</u> DATE: <u>7/31/07</u> TIME: <u>1600</u>	RECEIVED BY: <u>[Signature]</u> COMPANY: <u>TAL</u> DATE: <u>7/31/07</u> TIME: <u>1600</u>
RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____	RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- | | | |
|--|---|---|
| Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
DL = O
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
W = Wice
G = _____ | Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other | Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None |
|--|---|---|

COMMENTS: Date Received: <u>7/31/07</u> Courier: <u>TAL</u> Hand Delivered <input type="checkbox"/> Bill of Lading: _____
--

Page 49 of 201

SEVERN TRENT STL

STL Chicago COC: 080107B
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Royyal | B. Brooks
Company: MWI
Address: 6000
Phone: 815-423-6841
E-Mail:

BIR To: SAME
Contact:
Company:
Address:
Phone:
Fax:
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 500-5681

Package Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Sealed Yes <input type="radio"/> No <input checked="" type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Intact Yes <input type="radio"/> No <input checked="" type="radio"/>
Temperature °C of Cooler 4.3	

Sampler Name: RYAN YOUNG		Signature: <i>R. Young</i>		Refr #												Within Hold Time Yes <input checked="" type="radio"/> No <input type="radio"/>		Preserv. Indicated Yes <input type="radio"/> No <input type="radio"/> NA <input type="radio"/>		
Project Name: LAP SOIL		Project Number:		Volume												pH Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA <input type="radio"/>		Res Cl ₂ Check OK Yes <input type="radio"/> No <input type="radio"/> NA <input checked="" type="radio"/>		
Project Location:		Date Required		Preserv												Sample Labels and COC Agree Yes <input checked="" type="radio"/> No <input type="radio"/> COC not present				
Lab PM:		Hard Copy: _____ Fax: _____														Additional Analyses / Remarks				
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	8330	Pb	Cd	ROX	Ag	Zn	As	Ba	Cr					
		JPL3-BLACK PIT (2)	8/1/07	910	S	G	X	X	X	X	X	X	X	X	X		2 DAY TAT			
																	WD: 023			
																	BOA: 4016			

RELINQUISHED BY: *Shel* COMPANY: MWI DATE: 8/1/07 TIME: 1600 RECEIVED BY: *Jim James* COMPANY: MWI DATE: 8/1/07 TIME: 1705

RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____ RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sudge
 - MS = Miscellaneous
 - OL = O-
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
- 1. Plastic
 - 2. VOA Vial
 - 3. Sterile Plastic
 - 4. Amber Glass
 - 5. Widemouth Glass
 - 6. Other
- Preservative Key**
- 1. HCl, Cool to 4°
 - 2. H2SO4, Cool to 4°
 - 3. HNO3, Cool to 4°
 - 4. NaOH, Cool to 4°
 - 5. NaOH/Zn, Cool to 4°
 - 6. Cool to 4°
 - 7. None

COMMENTS

Date Received 8/1/07

Courier: TAL Hand Delivered

Bill of Lading

Page 119 of 12

SEVERN TRENT STL

STL Chicago WC: 050107A
 2417 Bond Street
 University Park, IL 60456
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: _____ Bill To: SAME Shaded Areas For Internal Use Only 1 of 1

Contact: S. ROSYRA / B. BROOKS Contact: _____
 Company: MWH Company: _____
 Address: 2000p Address: _____
 Phone: 815-423-6841 Phone: _____
 Fax: _____ Fax: _____
 E-Mail: _____ PO#: _____ Quote: _____

Lab Lot# 500-5682

Package Sealed Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Temperature °C of Cooler <u>4.3</u>	
Within Hold Time Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA
pH Check OK Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA
Sample Labels and CDC Agree Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> CDC not present	

Sampler Name: RIHAN YOUNG Signature: [Signature]

Project Name: LAPSOIL Project Number: _____

Project Location: _____ Date Required: _____
 Lab PM: _____ Hard Copy: _____
 Fax: _____

Laboratory ID	MIS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCB	VOC TELP	SVOC TELP	DECEA METALS	REACTIVITY	FLUORIDABILITY	6330	POMT FILTER	PTM Phenol	Corrosivity	Additional Analyses / Remarks
			Date	Time													
<u>1</u>		<u>JPL3 - WHITE PROFILE</u>	<u>8/1/07</u>	<u>0900</u>	<u>SD</u>	<u>G</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>2 DAY TAT</u>
																	<u>WU-023</u>
																	<u>BOA: 4016</u>

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/1/07 TIME: 1600 RECEIVED BY: [Signature] COMPANY: TAL DATE: 8/1/07 TIME: 1605

Matrix Key WW = Wastewater W = Water S = Soil SL = Sludge MS = Miscellaneous OL = Oil A = Air SE = Sediment SO = Solid DS = Drum Solid DL = Drum Liquid L = Leachate Wl = Wipe O = _____	Container Key 1. Plastic 2. VOA Vial 3. Sterile Plastic 4. Amber Glass 5. Widemouth Glass 6. Other	Preservative Key 1. HCl, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zr, Cool to 4° 6. Cool to 4° 7. None	COMMENTS 	Date Received <u>8, 1, 07</u> Courier: <u>TAL</u> Hand Delivered <input checked="" type="checkbox"/> Bill of Lading
---	---	---	------------------	---

SEVERN TRENT STL

STL Chicago COC: 0201 07 C
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: _____
 Contact: S. RUSYPAI / B. Brooks
 Company: MWH
 Address: Jo Ann
 Phone: 615-423-6211
 Fax: _____
 E-Mail: _____

Bill To: SAME
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only ____ of ____
Lab Lot# 500-5683

Package Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input type="radio"/>
Temperature °C of Cooler <u>4.3</u>	
Within Hold Time Yes <input checked="" type="radio"/> No <input type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input type="radio"/> NA
pH Check OK Yes <input checked="" type="radio"/> No <input type="radio"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="radio"/> No <input type="radio"/> NA
Sample Labels and COC Agree Yes <input checked="" type="radio"/> No <input type="radio"/> COC not present	

08/06/2007

Sampler Name: <u>EVAN YOUNG</u>		Signature: <u>[Signature]</u>		Refrg #															
Project Name: <u>LAP SOIL</u>		Project Number:		# / Cont.															
Project Location:		Date Required		Volume															
Lab PM:		Hard Copy: _____		Preserv															
Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Hydrous	Al silicate											
			Date	Time															
		<u>JPL3-WHITE PROFILE</u>	<u>8/1/07</u>	<u>705</u>	<u>SO</u>	<u>G</u>	<u>X</u>												

Additional Analyses / Remarks

Z DALL TAT

WU: 023

BOA: 4016

Page 28 of 98

RELINQUISHED BY <u>[Signature]</u> COMPANY <u>MWH</u> DATE <u>8/1/07</u> TIME <u>1600</u>	RECEIVED BY <u>[Signature]</u> COMPANY <u>TAL</u> DATE <u>8/1/07</u> TIME <u>1405</u>
RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____	RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- | | | |
|--|---|---|
| Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Liquid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____ | Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other | Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None |
|--|---|---|

COMMENTS

Date Received 8, 1, 07

Courier: TAL Hand Delivered

Bill of Lading

TestAmerica Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-5683

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	8330	Codie Brockem	Jan Duce	8/11/07	1900	
1	8330	Jan Duce	Codie Brockem	8/11/07	1930	
1	Metals	Codie Brockem	Jan Duce	8/21/07	16:55	
1	Metals	Jan Duce	Codie Brockem	8/21/07	17:30	

**SEVERN
TRENT** **STL**

STL Chicago 06: 080207
2417 Banc Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: S. Sosyan B. Brooks
Company: MWH
Address: JOAN
Phone: 815-423-6844
E-Mail:

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Lab Lot# 500-5719

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler 4.0	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	Res Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

08/27/07

Laboratory ID	MIS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cu	As	Ba	Zn	Cr	8330	BDX	Ag	Additional Analyses / Remarks
			Date	Time												
1		JPL3-STOCKPILE-1(0)	8/2/07	1000	S	G	X	X	X	X	X	X	X	X	X	2 DAY TAT
2		↓ STOCKPILE-2(0)	↓	1005	S	G	X	X	X	X	X	X	X	X	X	

Page 33 of 104

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/2/07 TIME: 1400
RELINQUISHED BY: COMPANY: DATE: TIME:

RECEIVED BY: [Signature] COMPANY: DATE: 8/2/07 TIME: 1400
RECEIVED BY: COMPANY: DATE: TIME:

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Sol
 - SL = Sludge
 - MS = Miscellaneous
 - DL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8/2/07
Courier: TML Hand Delivered
Bill of Lading

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. RUSYPAL / B. BROOKS
Contact: _____
Company: MWH
Address: JRDAY
Phone: 708-423-6241
E-Mail: _____

BNI To: CAME
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only of 1

Lab Lot# 500-5720

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler 4.0	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Sample Labels and CDC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CDC not present	

Sampler Name:		Signature:		Kefg #													
EYAN YOUNG		[Signature]		# / Cont.													
Project Name:		Project Number:		Volume													
SB-1				Preserv													
Project Location:		Date Required		Matrix		Comp/Grab											
Lab PM:		Hard Copy: _____ Fax: _____		SE		C		X		X		TOTAL 126					
Laboratory ID	MS-MSD	Client Sample ID		Sampling Date Time		Matrix	Comp/Grab									Additional Analyses / Remarks	
/		JPM4-SEDIMENT-B/2		8/2/07 1105		SE	C	X	X							2 DAY TAT	
																WD: 023	
																BOA: 4016	

RELINQUISHED BY: [Signature]	COMPANY: MWH	DATE: 8/2/07	TIME: 1400	RECEIVED BY: [Signature]	COMPANY: TAL	DATE: 8/2/07	TIME: 1400
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = So
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - D =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received / /

Courier: TAL **Hand Delivered:**

Bill of Lading

Page 18 of 89

**SEVERN
TRENT** **STL**

STL Chicago WC:080307
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. Rishy PA / B. Brooks
Company: MWH
Address: JANAP
Phone: 815-423-6241
Fax: _____
E-Mail: _____

Bill To: SAME

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

Shaded Areas For Internal Use Only _____ of _____

Lab Lot# 500-5767

Package Sealed Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA
pH Check OK Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA
Sample Labels and COC Agree Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> GOC not present	

Sampler Name: RYAN YOUNG Signature: [Signature]
Project Name: LAPSDU Project Number: _____
Project Location: _____ Date Required: _____
Lab PM: _____ Hard Copy: _____
Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Pb _{TOTL}													Additional Analyses / Remarks	
			Date	Time																		
1		JPM4-AP21 (0.5)	8/31/07	1000	S	G	X	Y														2 DAY TAT
2		AP22 (2)		1005			X	Y														
3		AP23 (0.5)		1010			X	Y														WO: 023
4		AP24 (2)		1015			X	X														
5		AP25 (0.5)		1020			Y	X														BDA: 4016
6		AP26 (2)		1025			Y	Y														
7		AP27 (0.5)		1030			Y	Y														
8		AP28 (2)		1035			Y	Y														
9		AP29 (0.5)		1040			Y	X														
10		AP30 (2)		1045			Y	Y														
11		AP31 (0.5)		1050			X	X														
12		AP30 (2)-D	↓	1045	↓	↓	X	Y														

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/3/07 TIME: 1500
RECEIVED BY: [Signature] COMPANY: MWH DATE: 8/3/07 TIME: 1530

- Matrix Key**
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 DS = Drum Solid
 OL = Drum Liquid
 L = Leachate
 WL = Wipe
 O = _____
- Container Key**
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8/3/07
 Courier: YAL Hand Delivered
 Bill of Lading _____

Page 68 OF 259

SEVERN TRENT STL

STL Chicago COC: 080807
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Riscy pal / B.B. Roovers
Company: MWH
Address: JAAA
Phone: 708-423-6841
Fax:
E-Mail:

Bill To: SAME
Contact:
Company:
Address:
Phone:
Fax:
PO#: **Quote:**

Shaded Areas For Internal Use Only of

Lab Lot# 500-5840

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature °C of Cooler 40	

Sampler Name: RYAN YOUNG
Signature: *Ryan Young*
Project Name: LAP SOIL
Project Number:
Project Location:
Lab PM:
Date Required:
Hard Copy:
Fax:

Refr #
/ Cont.
Volume
Preserv.

Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCB	VOC	TEL	SVOC	TCLP	RESCRA METALS TEL	REACTIVITY	HEAVY METALS	X333	PAINT FILTER	TOTAL PHENOL	CONDUCIVITY	Additional Analyses / Remarks
			Date	Time															
1		JPM4-PROFILE-2	8/8/07	1000	MS	C	X	X	X	X	X	X	X	X	X	X	X	X	5 DAY TAT WD: 023 BDA: 4016

RELINQUISHED BY: <i>[Signature]</i>	COMPANY: MWH	DATE: 8/8/07	TIME: 1400	RECEIVED BY: <i>[Signature]</i>	COMPANY: JAL	DATE: 8/8/07	TIME: 1400
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = O
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solids
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8, 8, 07

Courier: JAL **Hand Delivered**

Bill of Lading

**SEVERN
TRENT** **STL**

STL Chicago **COC: 081007**
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: _____
 Contact: S. Rosypal / B. Brooks
 Company: MWH
 Address: Jessup
 Phone: 815-423-6241
 Fax: _____
 E-Mail: _____

Bill To: same
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1
Lab Lot# 500-5933
 Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on Ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: 3.7
 Within Hold Time: Yes No
 Preserv. Indicated: Yes No NA
 pH Check OK: Yes No NA
 Res Cl₂ Check OK: Yes No NA
 Sample Labels and COC Agree: Yes No
 COC not present:

Sampler Name: RYAN YOUNG Signature: [Signature] Refry # _____
 Project Name: LAP SOIL Project Number: _____ # / Cont. _____
 Project Location: _____ Date Required _____ Volume _____
 Lab PM: _____ Hard Copy: _____ Preserv: _____
 Date Required _____
 Hard Copy: _____
 Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCN	Pb	Zn	As	Cu	Tl	PCB	Additional Analyses / Remarks
			Date	Time										
1		JPLS-PCN2-1(E)	8/10/07	0800	S	C	X	X	X	X	X	X	X	5 DAY TAT
2		2(S)		0805			X	X	X	X	X	X	X	
3		3(S)		0810			Y	X	X	X	X	X	X	WO: 023
4		4(S)		0815			X	X	X	X	X	X	X	
5		5(S)		0820			X	X	X	X	X	X	X	BDA: 4016
6		6(S)		0825			X	X	X	X	X	X	X	
7		7(S)		0830			X	X	X	X	X	X	X	
8		8(S)		0835			X	X	X	X	X	X	X	
9		9(S)		0840			X	X	X	X	X	X	X	
10		10(S)		0845			X	X	X	X	X	X	X	

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/10/07 TIME: 1400
 RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

RECEIVED BY: [Signature] COMPANY: FAL DATE: 8/10/07 TIME: 1400
 RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liq.
 - L = Leachate
 - WI = Wipe
 - O = _____

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS: _____

Date Received: 8, 10, 07
 Courier: FAL Hand Delivered:
 Bill of Lading: _____

SEVERN TRENT STL

STL Chicago COC:081307A
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. ROSYPAL | B. Brooks
 Company: MWH
 Address: JAAP
 Phone: 815-423-6241
 Fax:
 E-Mail:

Bill To:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only of

Lab Lot# 500-5954

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.7</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (NA)
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (NA)	Res Cl ₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (NA)
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name: <u>RYAN YOUNG</u>	Signature: <u>[Signature]</u>	Refrg #																		
Project Name: <u>LAP SOIL</u>	Project Number:	Volume																		
Project Location:	Date Required	Preserv																		
Lab PM:	Hard Copy: <u> </u> <u> </u> <u> </u>	Matrix																		
	Fax: <u> </u> <u> </u> <u> </u>	Comp/Grab																		

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	PCN	PLB												
1		PLS-PCN2-11(E)	8/13/07	908	S	C	X	X												
2		12(S)		908			X	Y												
3		13(S)		910			X	Y												
4		14(S)		915			X	Y												
5		15(S)		920			X	Y												
6		16(S)		925			X	Y												
7		17(S)		930			X	Y												
8		18(S)		935			X	Y												
9		19(S)		940			X	Y												
10		20(S)		945			X	Y												
11		21(S)		950			X	Y												
12		22(S)		955			X	Y												

Additional Analyses / Remarks

5 DAY TEST

WD: 023

BOA: 4016

RELINQUISHED BY: <u>[Signature]</u> COMPANY: <u>MWH</u> DATE: <u>8/13/07</u> TIME: <u>10:00</u>	RECEIVED BY: <u>[Signature]</u> COMPANY: <u>MWH</u> DATE: <u>8/13/07</u> TIME: <u>1600</u>
---	--

Matrix Key WW = Wastewater W = Water S = Soil SL = Sludge MS = M.scol aneous OL = Oil A = Air SE = Sediment SD = Solid DS = Drum Solid DL = Drum Liquid L = Leachate WI = Wipe O =	Container Key 1. Plastic 2. VOA Vial 3. Sterile Plastic 4. Amber Glass 5. Widemouth: Glass 6. Other	Preservative Key 1. HCl, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. Cool to 4° 7. None	COMMENTS 	Date Received <u> </u> <u> </u> <u> </u> Courier <u> </u> Hand Delivered <input type="checkbox"/> Bill of Lading
---	--	---	-------------------------	--

page 52 of 163

SEVERN TRENT STL

STL Chicago COC: 081307B
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. RUSYPAL / B. BROOKS
 Contact: _____
 Company: MWH
 Address: JOAN P
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To: SAME
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only of _____

Lab Lot# 500-5954

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.7</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	Res Cl ₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name:		Signature:		Refrg #														
Project Name:		Project Number:		Volume														
Project Location:		Date Required		Preserv														
Lab PH:		Hard Copy: _____		Matrix	Comp/Grab													
Lab PH:		Fax: _____																
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	PCN	Pb										
13		JPLS-PCN2-23(S)	8/13/07	1000	S	C	X	X										
14		24(S)		1005			X	X										
15		25(S)		1010			X	X										
16		26(S)		1015			X	X										
17		27(I)		1020			X	X										

Additional Analyses / Remarks

2 DAY TAT

WD: 023

BDA: 4016

RELINQUISHED BY <u>[Signature]</u>	COMPANY <u>MWH</u>	DATE <u>8/13/07</u>	TIME <u>1600</u>	RECEIVED BY <u>[Signature]</u>	COMPANY <u>TAL</u>	DATE <u>8/13/07</u>	TIME <u>1600</u>
RELINQUISHED BY _____	COMPANY _____	DATE _____	TIME _____	RECEIVED BY _____	COMPANY _____	DATE _____	TIME _____

Matrix Key

WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air

SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O = _____

Container Key

- Plastic
- VOA Vial
- Sterile Plastic
- Amber Glass
- W/demou:th Glass
- Other

Preservative Key

- HCl, Cool to 4°
- H2SO4, Cool to 4°
- HNO3, Cool to 4°
- NaOH, Cool to 4°
- NaOH/Zn, Cool to 4°
- Cool to 4°
- None

COMMENTS

Date Received _____

Courier: _____ Hand Delivered

Bill of Lading _____

**SEVERN
TRENT
STL**

STL Chicago COC: 081407A
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. Rosypal / B. Rowles
 Company: MWH
 Address: Joanp
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To: SALE

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 2

Lab Lot# 500-5975

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	Res Cl, Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name:		Signature:		Refr #															
RYAN YOUNT		<i>[Signature]</i>		# / Cont		Volume		Preserv		Matrix		Comp/Grab		Pb					
Project Name:		Project Number:																	
Project Location:		Date Required																	
Lab PM:		Hard Copy: _____																	
Fax: _____																			
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	Pb												
1		JPM4- AP 32 (0.5)	8/14/07	900	S	G	X												2 DAY TAT
2		AP 33 (0.5)		905			X												
3		AP 34 (0.5)		910			X												WD: D23
4		AP 35 (0.5)		915			X												
5		AP 36 (0.5)		920			X												BDA: 4D16
6		AP 37 (0.5)		925			X												
7		AP 38 (0.5)		930			X												
8		AP 39 (0.5)		935			X												
9		AP 40 (0.5)		940			X												
10		AP 41 (0.5)		945			X												
11		AP 42 (0.5)		950			X												
12		AP 43 (0.5)		955			X												

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/14/07 TIME: 1600

RECEIVED BY: [Signature] COMPANY: TAL DATE: 8/14/07 TIME: 1506

RECEIVED BY: [Signature] COMPANY: TAL DATE: 8/14/07 TIME: 1556

Matrix Key

WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air

SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O = _____

Container Key

- Plastic
- VQA Vial
- Sterile Plastic
- Amber Glass
- Widermouth Glass
- Other

Preservative Key

- HCl, Cool to 4°
- H2SO4, Cool to 4°
- HNO3, Cool to 4°
- NaOH, Cool to 4°
- NaOH/Zn, Cool to 4°
- Cool to 4°
- None

COMMENTS

Date Received: 1/1

Courier: TAL Hand Delivered

Bill of Lading

08/16/2007 Page 50 of 163

**SEVERN
TRENT
STL**

STL Chicago
2417 Bond Street W.C.: 0814073
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact: S. Ruypan / B Brooks
Company: MWH
Address: Jossy
Phone: 815.423.6841
Fax:
E-Mail:

Bill To:
Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 2 of 2
Lab Lot# 500-5975
Package Sealed: Yes No
Samples Sealed: Yes No
Received on Ice: Yes No
Samples Intact: Yes No
Temperature °C of Cooler: 4.0
Within Hold Time: Yes No
Preserv. Indicated: Yes No NA
pH Check OK: Yes No NA
Res Cl₂ Check OK: Yes No NA
Sample Labels and COC Agree: Yes No
COC not present

Sampler Name: RYAN YOUNG **Signature:** [Signature]
Project Name: LAP SOIL **Project Number:**
Project Location: **Date Required:**
Lab PM: **Hard Copy:**
Fax:

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pl	Refr #	#/Cont	Volume	Preserv
			Date	Time							
13		JPM4-AP44 (0.5)	01/14/07	1000	S	G	X				
14		AP45 (0.5)		1005			X				
15		AP46 (0.5)		1010			X				
16		AP47 (0.5)		1015			X				
17		AP48 (0.5)		1020			X				
18		AP49 (0.5)		1025			X				
							X				
							X				
							X				
							X				
							X				
							X				

Additional Analyses / Remarks
Z DAY TAG
W.C.: 023
BoA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/14/07 TIME: 1600
RECEIVED BY: [Signature] COMPANY: TA DATE: 8/14/07 TIME: 1500
RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/14/07 TIME: 1556
RECEIVED BY: [Signature] COMPANY: TA DATE: 8/14/07 TIME: 1556

- Matrix Key**
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
- SE = Sediment**
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WL = Wipe
O =
- Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
- Preservative Key**
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS
Date Received 8/14/07
Courier: **Hand Delivered**
Bill of Lading

**SEVERN
TRENT** **STL**

STL Chicago LOC: 081507C
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Rosypa, B. Brooks
Company: MWH
Address: JORDAN
Phone: 815-423-6641
E-Mail:

Bin To: SAME
Contact:
Company:
Address:
Phone:
Fax:
PO#: **Quote:**

Shaded Areas For Internal Use Only of

Lab Lot# 500-6015

Package Sealed Yes (No)
Samples Sealed Yes (No)

Received on Ice Yes (No)
Samples Intact Yes (No)

Temperature °C of Cooler 5.2

Within Hold Time Yes (No)
Preserv. Indicated Yes (No) NA

pH Check OK Yes (No) NA
Res Cl₂ Check OK Yes (No) NA

Sample Labels and COC Agree Yes (No)
COC not present

Sampler Name:		Signature:		Refrig #																
RYAN YOUNG		<i>[Signature]</i>		# / Cool.																
Project Name:		Project Number:		Volume																
LAP SOIL				Preserv																
Project Location:		Date Required		Matrix		Comp/Grab														
Lab PM:		Hard Copy: ___/___/___ Fax: ___/___/___		PL TCUP PD																
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	PL	TCUP	PD											
1		JPL5-AP1(0.5)	8/15/07	900	S	G	X	X												2 DAY TAT NO: 023 BOA: 4024

RELINQUISHED BY *[Signature]* COMPANY *MWH* DATE 8/15/07 TIME 1600 RECEIVED BY *[Signature]* COMPANY *716* DATE 8/15/07 TIME 1508

RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____ RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

Matrix Key
 WW = Wastewater SE = Sediment
 W = Water SO = Solid
 S = Soil DS = Drum Solid
 SL = Sludge DL = Drum Liquid
 MS = Miscellaneous L = Leachate
 OL = Oil WI = Waste
 A = Air O = _____

Container Key
 1. Plastic
 2. VOA Val
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8, 15, 07
 Courier: TNL Hand Delivered
 Bill of Lading

**SEVERN
TRENT** **STL**

STL Chicago CCL-081507A
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: Contact: <u>S. ROSYPAK</u> <u>B. BOGGS</u> Company: <u>MWH</u> Address: <u>JOLLA</u> Phone: <u>847-423-6444</u> Fax: _____ E-Mail: _____	Bill To: Contact: _____ Company: _____ Address: _____ Phone: _____ Fax: _____ PO#: _____ Quote: _____	Shaded Areas For Internal Use Only of _____ Lab Lot# <u>500-6017</u> <table border="1"> <tr> <td>Package Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td>Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> </tr> <tr> <td>Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></td> <td>Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></td> </tr> <tr> <td colspan="2">Temperature °C of Cooler <u>5.2</u></td> </tr> <tr> <td>Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></td> <td>Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</td> </tr> <tr> <td>pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</td> <td>Res Cl₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</td> </tr> <tr> <td colspan="2">Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present</td> </tr> <tr> <td colspan="2">Additional Analyses / Remarks</td> </tr> </table>	Package Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Temperature °C of Cooler <u>5.2</u>		Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present		Additional Analyses / Remarks	
Package Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>															
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>															
Temperature °C of Cooler <u>5.2</u>																
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA															
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA															
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present																
Additional Analyses / Remarks																

Sampler Name: <u>RYAN YOUNG</u>		Signature: <u>[Signature]</u>		Refr #																
Project Name: <u>LAP SOIL</u>		Project Number:		# / Cont:																
Project Location:		Date Required		Volume																
Lab PM:		Hard Copy: ___/___/___		Preserv																
Fax: ___/___/___		Matrix	Comp/Grab																	
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time																
<u>1</u>		<u>JPL5-AP37 (0.5)</u>	<u>8/15/07</u>	<u>1000</u>	<u>S</u>	<u>G</u>	<u>X</u>													
<u>2</u>		<u>AP38 (0.5)</u>		<u>1005</u>			<u>X</u>													
<u>3</u>		<u>AP39 (0.5)</u>		<u>1010</u>			<u>X</u>													
<u>4</u>		<u>AP40 (0.5)</u>		<u>1015</u>			<u>X</u>													
<u>5</u>		<u>AF22 (2)</u>		<u>1020</u>			<u>X</u>													
<u>6</u>		<u>AF23 (2)</u>		<u>1025</u>			<u>X</u>													

2 DAY TAT
WO: 023
BOA: 4016

RELINQUISHED BY <u>[Signature]</u> COMPANY <u>MWH</u> DATE <u>8/15/07</u> TIME <u>1600</u>	RECEIVED BY <u>[Signature]</u> COMPANY <u>TA</u> DATE <u>8/16/07</u> TIME <u>1509</u>
RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____	RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- | | | |
|--|--|--|
| Matrix Key | Container Key. | Preservative Key |
| WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air | SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____ | 1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None |

COMMENTS	Date Received <u>8/15/07</u>
	Courier: <u>TAL</u> Hand Delivered <input checked="" type="checkbox"/>
	Bill of Lading

page 33 of 118

**SEVERN
TRENT** **STL**

STL Chicago COL: 0815 07 B
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Rosypal / B. Brooks **Bill To:** SAVE **Shaded Areas For Internal Use Only** of _____

Contact: _____
 Company: MWH
 Address: DOAP

Phone: 615-423 6241
 Fax: _____
 E-Mail: _____

Contact: _____
 Company: _____
 Address: _____

Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Lab Lot# 500-6018

Package Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature °C of Cooler 5.2	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl₂ Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> COC not present	

08/20/2007

Sampler Name:		Signature:		Refr #														
Project Name:		Project Number:		# / Cont														
Project Location:		Date Required		Volume														
Lab PM:		Hard Copy: _____		Preserv														
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab												
1		JPLS-AF24 (4)	8/15/07	1030	S	G	X											
2		↓ AF25 (4)	↓	1035	↓	↓	X											
3		↓ AF26 (4)	↓	1040	↓	↓	X											

Additional Analyses / Remarks

Z DAY TAT

WB: 023

BOA: 4016

Page 38 of 140

RELINQUISHED BY: <u>[Signature]</u>	COMPANY: <u>MWH</u>	DATE: <u>8/15/07</u>	TIME: <u>1600</u>	RECEIVED BY: <u>[Signature]</u>	COMPANY: <u>TR</u>	DATE: <u>8/15/07</u>	TIME: <u>1509</u>
RELINQUISHED BY: _____	COMPANY: _____	DATE: _____	TIME: _____	RECEIVED BY: _____	COMPANY: _____	DATE: _____	TIME: _____

- | | | | |
|--|--|---|--|
| <p>Matrix Key</p> <p>WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air</p> | <p>SE = Sec ment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O =</p> | <p>Container Key.</p> <p>1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other</p> | <p>Preservative Key</p> <p>1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None</p> |
|--|--|---|--|

COMMENTS

Date Received 8/15/07

Courier: TBL Hand Delivered

Bill of Lading

SEVERN TRENT STL

STL Chicago LOC: 081407A
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. Rozypal / B. Bowles
 Company: MWH
 Address: Jcamp
 Phone: 815-425-6841
 Fax:
 E-Mail:

Bill To: same

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: QUOTE

Shaded Areas For Internal Use Only 1 of 2

Lab Lot# 500-5975

Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Temperature °C of Cooler
4.0

Sampler Name: Ryan Young
 Project Name: LAP SOIL
 Project Location:
 Lab PM:

Signature: [Signature]
 Project Number:
 Date Required
 Hard Copy: / /
 Fax: / /

Matrix	Comp/Grab	Preserv	Volume	F/Conc	Refrig	Temp	Time													
--------	-----------	---------	--------	--------	--------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl ₂ Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and CDC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CDC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PB	Additional Analyses / Remarks											
			Date	Time															
1		JPM4- AP 32 (0.5)	8/14/07	900	S	G	X	2 DAY TAT											
2		AP 33 (0.5)		905			X	WD: 023											
3		AP 34 (0.5)		910			X	BOA: 4016											
		AP 35 (0.5)		915			X												
		AP 36 (0.5)		920			X												
		AP 37 (0.5)		925			X												
		AP 38 (0.5)		930			X												
		AP 39 (0.5)		935			X												
		AP 40 (0.5)		940			X												
		AP 41 (0.5)		945			X												
		AP 42 (0.5)		950			X												
		AP 43 (0.5)		955			X												

RELINQUISHED BY [Signature] COMPANY MWH DATE 8/14/07 TIME 1600

RECEIVED BY [Signature] COMPANY TAL DATE 8/14/07 TIME 1506

- | | | |
|---|--|---|
| Matrix Key
WW - Wastewater
W - Water
S - Soil
SL - Sludge
MS - Miscellaneous
OL - Oil
A - Air | Container Key
1 - Plastic
2 - VOA Vial
3 - Single Plastic
4 - Amber Glass
5 - Miscellaneous Glass
6 - Other | Preservative Key
1 - HCl, Cool to 4°
2 - H2SO4, Cool to 4°
3 - HNO3, Cool to 4°
4 - None, Cool to 4°
5 - None, Cool to 4°
6 - None, Cool to 4° |
|---|--|---|

COMMENTS
 Date Received / /
 Courier: TAL Hand Delivered
 Bill of Lading

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Pospol / B Brooks
 Contact: _____
 Company: MWH
 Address: Josay
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To: _____
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 2 of 2

Lab Lot# 500-5975

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Res Cl, Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

08/27/2007

Sampler Name: RYAN Young
 Signature: [Signature]
 Project Name: LAP SOIL
 Project Number: _____
 Project Location: _____
 Lab PM: _____
 Date Required: _____
 Hard Copy: _____
 Fax: _____

Lab ID	MS-MED	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cadmium	Copper	Lead	Manganese	Mercury	Nickel	Silver	Vanadium	Zinc	
			Date	Time													
<u>13</u>		<u>JPM4-AP44 (0.5)</u>	<u>01/14/07</u>	<u>1000</u>	<u>S</u>	<u>G</u>	<u>X</u>										
<u>14</u>		<u>AP45 (0.5)</u>		<u>1005</u>			<u>X</u>										
<u>15</u>		<u>AP46 (0.5)</u>		<u>1010</u>			<u>X</u>										
<u>16</u>		<u>AP47 (0.5)</u>		<u>1015</u>			<u>X</u>										
<u>17</u>		<u>AP48 (0.5)</u>		<u>1020</u>			<u>X</u>										
<u>18</u>		<u>AP49 (0.5)</u>		<u>1025</u>			<u>X</u>										
							<u>X</u>										
							<u>X</u>										
							<u>X</u>										
							<u>X</u>										
							<u>X</u>										

Additional Analyses / Remarks

Z DAY TAG

WC: 023

BOA: 4016

Page 32 of 121

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/14/07 TIME: 1000
 RECEIVED BY: [Signature] COMPANY: TA DATE: 8/14/07 TIME: 1500
 RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____
 RECEIVED BY: [Signature] COMPANY: TA DATE: 8/17/07 TIME: 1556

- | | | |
|--|--|--|
| Matrix Key | Container Key | Preservative Key |
| WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air | SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____ | 1. HCL Cool to 4°
2. H2SO4 Cool to 4°
3. HNO3 Cool to 4°
4. Fuming HNO3
5. Hydroxylamine
6. _____
7. _____ |

COMMENTS: _____

Date Received: 1/1

Courier: _____ Hand Delivered:

Bill of Lading: _____

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-6053

Client: JOYAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-4	digestion to ICP	<i>[Signature]</i>	<i>T. Chen</i>	8/20/07	1330	
1-4	ICP	<i>[Signature]</i>	<i>LMS-177</i>	8/22/07	1000	

TestAmerica Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-6053

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
	Metals	obtained &	returned	w/o sig	8/27/07	

**SEVERN
TRENT** **STL**

STL Chicago **COC: 0817 07A**
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:
 Contact: S. Rosypa / B Books
 Company: MWH
 Address: 3000
 Phone: 815-425-6241
 Fax: _____
 E-Mail: _____

Bill To: SALE
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PC#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1
Lab Lot# 500-6078
 Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on Ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: 4.0

Sampler Name: R. Young
Signature: *[Signature]*
Project Name: LAP SOIL
Project Number: _____
Project Location: _____
Lab PM: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Refrg #	# / Cont.	Volume	Preserv	Matrix	Comp/Grab	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
						VOA	SO4	NO3	NO2	AM	PH	AS														
						S	G	✓	✓	✓	✓	X														

Within Hold Time: Yes No
Preserv. Indicated: Yes No NA
pH Check OK: Yes No NA
Res Cl₂ Check OK: Yes No NA
Sample Labels and COC Agree: Yes No
COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
		JPLS-AP41 (O.S)	8/17/07	900	S	G	✓	✓	✓	✓	X															

Additional Analyses / Remarks
2 DAL 125
WU: 023
BOA: 4012

RELINQUISHED BY *[Signature]* COMPANY MWH DATE 8/17/07 TIME 1400

RECEIVED BY *[Signature]* COMPANY TAL DATE 8/17/07 TIME 1430

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Wipe
 - O = _____

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8/17/07
Courier TAL **Hand Delivered**
Bill of Lading

08/21/2007 page 29 of 100

**SEVERN
TRENT
STL**

STL Chicago COC:081707B
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Husypal / B B Cooks **Bill To:** SAME **Shaded Areas For Internal Use Only** 1 of 1

Contact: S. Husypal / B B Cooks Contact: _____
 Company: MWL Company: _____
 Address: Joaoyl Address: _____
 Phone: 815-423-6641 Phone: _____
 Fax: _____ Fax: _____
 E-Mail: _____ PO#: _____ Quote: _____

Lab Lot# 500-6079

Package Sealed Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA
pH Check OK Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA	Res Cl₂ Check OK Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> NA
Sample Labels and COC Agree Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> COC not present	

Sampler Name: R. Young **Signature:** [Signature]

Project Name: LAP SOIL **Project Number:** _____

Project Location: _____ **Date Required:** _____

Lab PM: _____ **Hard Copy:** _____
Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cu	As	Zn	Refr #	# / Cont.	Volume	Preserv
			Date	Time										
1		JPL2-SP17 (1)	8/17/07	1000	S	S	X	X	X	X				
2		↓ SP18 (1)	↓	1005	↓	↓	X	X	X	X				
3		↓ SP19 (1)	↓	1010	↓	↓	X	X	X	X				
4		↓ SP20 (1)	↓	1015	↓	↓	X	X	X	X				

Additional Analyses / Remarks

Z DAY TAF

WD: 023

BOA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWL DATE: 8/17/07 TIME: 1400 RECEIVED BY: [Signature] COMPANY: TAL DATE: 8/17/07 TIME: 1430

RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____ RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O = _____
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8, 17, 07

Courier TAL Hand Delivered

Bill of Lading _____

**SEVERN
TRENT
STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: SEVERN / Brooks
Contact: _____
Company: MWH
Address: DOAAP
Phone: 815-423-6241
Fax: _____
E-Mail: _____

Bill To: SEVERN
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

Shaded Areas For Internal Use Only of _____
Lab Lot# 500-6089
Package Sealed: Yes No
Samples Sealed: Yes No
Received on Ice: Yes No
Samples Intact: Yes No
Temperature °C of Cooler: 3.5

Sampler Name: Ryan Young
Project Name: STORM WATER
Project Location: _____
Lab PM: _____

Signature: [Signature]
Project Number: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Refry #	# / Cont.	Volume	Preserv.	Matrix	Comp/Grab	Pl	Cu	Ba	Cr	As	Ag	8330	Zn	TSS
						x	x	x	x	x	x	x	x	x
							x	x	x	x	x	x	x	x

Within Hold Time: Yes No
Preserv. Indicated: Yes No NA
pH Check OK: Yes No NA
Res Cl₂ Check OK: Yes No NA
Sample Labels and COC Agree: Yes No
COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	Pl	Cu	Ba	Cr	As	Ag	8330	Zn	TSS	Additional Analyses / Remarks
1		JPL3-STORMWATER-VS#6	8/20/07		W	G	x	x	x	x	x	x	x	x	x	14 DAY DAT
2		JPL3-STORMWATER-DS #6	↓		W	G		x	x	x	x	x	x	x	x	WU: 023 BOA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 8/20/07 TIME 1400

RECEIVED BY [Signature] COMPANY TAL DATE 8/20/07 TIME 1700

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
D =

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. AmBer Glass
5. Widemouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received 8/20/07
Courier: TAL Hand Delivered
Bill of Lading



STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S Pasypun / B. Brooks
 Contact: _____
 Company: MWH
 Address: JDAAT
 Phone: 812-423-6841
 Fax: _____
 E-Mail: _____

BNI To: SAME
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 500-5635-2

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Repacked on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature -C of Cooler <u>3.6</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name:		Signature:		Ref #													
<u>Ryan Young</u>		<u>[Signature]</u>															
Project Name:		Project Number:		Volume													
<u>LAP SOIL</u>																	
Project Location:		Date Required		Matrix	Comp/Grab												
		Hard Copy: _____ Fax: _____															
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	VOC	SVOC	PESTICIDES	PCB	ECRA & METALS						
<u>1</u>		<u>JPL3-GEN FILL</u>	<u>7/30/07</u>	<u>1400</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>						
<u>2</u>		<u>JPL3-TOP SOIL</u>	<u>↓</u>	<u>1405</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>						

Additional Analyses / Remarks

2 DAY TAT

WO: 023

BOA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 7/30/07 TIME: 1430

RECEIVED BY: [Signature] COMPANY: TAL DATE: 7/30/07 TIME: 1500

- | | | |
|---|--|---|
| Matrix Key | Container Key | Preservative Key |
| WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = M scell/medu
OL = Oil
A = Air | SE = Sediment
SS = Silt
CS = Clean Solid
CS+ = Clean Solid
CS- = Clean Solid
CS+ = Clean Solid
CS- = Clean Solid | 1. Plastic
2. Glass
3. Amber Plastic
4. Amber Glass
5. Amber Glass
6. Amber Glass
7. Amber Glass
8. Amber Glass
9. Amber Glass
10. Amber Glass |

COMMENTS

Date Received: 7/30/07

Courier: TAL Hand Delivered:

Bill of Lading

Page 28 of 111 08/29/2007

SEVERN TRENT STL

STL Chicago 602-082107A
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Wasyral / B Brooks
Company: MWH
Address: JAAA
Phone: 815-423-6841
E-Mail:

Bill To: SAME
Contact:
Company:
Address:
Phone:
Fax:
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 500-6112

Package Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature °C of Cooler 4.0	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl₂ Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> COC not present	

Sampler Name: R. Young
Signature: [Signature]
Project Name: LAPSOIL
Project Number: [Signature]

Project Location:
Lab PM:
Date Required:
Hard Copy: ___/___/___
Fax: ___/___/___

Laboratory ID	MIS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cr	TL	Zn	As	Sb	Cd	Ag	TPH	Additional Analyses / Remarks
			Date	Time												
1		JPLS-SP1(1)	8/21/07	900	S	G	Y	X	X	X	X	X	X	X	X	2 DAY TAT
2		SP2(1)		905			Y	X	X	X	X	X	X	X	X	
3		SP3(1)		910			Y	X	Y	X	X	X	X	X	X	WO: 023
4		SP4(1)		915			Y	X	X	X	X	X	X	X	X	
5		SP5(1)		920			X	X	X	X	X	X	X	X	X	BOA: 4016
6		SP6(1)		925			Y	X	X	X	X	X	X	X	X	

RELINQUISHED BY: [Signature]	COMPANY: MWH	DATE: 8/21/07	TIME: 1900	RECEIVED BY: [Signature]	COMPANY: VAL	DATE: 8/21/07	TIME: 1530
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sudge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
- Plastic
 - VOA Vial
 - Sterile Plastic
 - Amber Glass
 - Widemouth Glass
 - Other

- Preservative Key**
- HCl, Cool to 4°
 - H2SO4, Cool to 4°
 - HNO3, Cool to 4°
 - NaOH, Cool to 4°
 - NaOH/Zn, Cool to 4°
 - Coc to 4°
 - None

COMMENTS

Date Received 8/21/07

Courier: VAL **Hand Delivered**

Bill of Lading

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-0133

Client: TDAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1.2	digestion to ID	Lore Peltz	T. Szm	8/23/07	1300	
1.2	ICP	T. Szm	Ken S-17+	8/24/07	1300	

SEVERN TRENT STL

STL Chicago Loc: 082207
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

BIN To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: S. RASAYAN / BB BOWLS
 Company: MWH
 Address: JD AAP
 Phone: 815-423-6841
 Fax:
 E-Mail:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: _____ Quote:

Lab Lot# 500-6134

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.3</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name: R-YOUNG
 Signature: [Signature]
 Project Name: LAP
 Project Number:
 Project Location:
 Lab PN:
 Date Required
 Hard Copy: _____
 Fax: _____

Refrg #	# / Cont.	Volume	Preserv	Matrix	Comp/Grab	PCB	VOC	TCLP	SVOC	TCLP	PCQA	METALS	TCLP	REACTIVITY	IGNITABILITY	8330	PANIT	FILTER	TOTAL	PHENOL	COCAO SIVILITY
---------	-----------	--------	---------	--------	-----------	-----	-----	------	------	------	------	--------	------	------------	--------------	------	-------	--------	-------	--------	----------------

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCB	VOC	TCLP	SVOC	TCLP	PCQA	METALS	TCLP	REACTIVITY	IGNITABILITY	8330	PANIT	FILTER	TOTAL	PHENOL	COCAO SIVILITY	Additional Analyses / Remarks
			Date	Time																			
1		JPM3-CONCRETE PROFILE	8/22/07	800	S	SO																	Z DAY TAG WO: 023 BOA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 8/22/07 TIME 1400
 RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____

RECEIVED BY [Signature] COMPANY TAL DATE 8/22/07 TIME 1500
 RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = So²
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - D = _____
- Container Key**
- Plastic
 - VOA Vial
 - Sterile Plastic
 - Amber Glass
 - Widemouth Glass
 - Other
- Preservative Key**
- HCl, Cool to 4°
 - H2SO4, Cool to 4°
 - HNO3, Cool to 4°
 - NaOH, Cool to 4°
 - NaOH/Zn, Cool to 4°
 - Cool to 4°
 - None

COMMENTS

Date Received 8/22/07

Courier: TAL Hand Delivered

Bill of Lading

SEVERN TRENT STL

STL Chicago
 2417 Bond Street COC: 082807 B
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Rospal / B. Brackley
Company: MWH
Address: Jalnet
Phone: 915-423-6841
Fax:
E-Mail: susanne.rospal@mwhglobal.com **Quote:**

Bill To: Same
Company:
Address:
Phone:
Fax:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 500-6237

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature °C of Cooler 4.0	
Within Hold Time Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	AS	Refr #	# / Cont.	Volume	Preserv
			Date	Time							
1		JPLS-AFZ7(S)	8/28/07	0930	SG	✓					

Additional Analyses / Remarks

Z Day TAT

BOA: 4016

WD: 023

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/28/07 TIME: 1600 RECEIVED BY: [Signature] COMPANY: TAC DATE: 8/28/07 TIME: 1700

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/28/07 TIME: 1600 RECEIVED BY: [Signature] COMPANY: TAC DATE: 8/28/07 TIME: 1700

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - OL = Drum Liquid
 - L = Leachate
 - WI = Waste
 - 0 =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8/28/07

Courier: TAC Hand Delivered

Bill of Lading

SEVERN TRENT STL

STL Chicago
 2417 Bond Street **CO: 082807**
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. Rosypal / B. Brooks
 Company: MWH
 Address: _____
 Phone: 815-423-6841
 Fax: _____
 E-Mail: Suzanne.rosypal@mwhglobal.com

BNI To:

Contact: same
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 500-6238

Package Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
--	--

Received on Ice Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
---	--

Temperature °C of Cooler
4.0

Within Hold Time Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
--	---

pH Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
--	---

Sample Labels and COC Agree
Yes No COC not present

Laboratory ID	MS-MISD	Client Sample ID	Sampling		Matrix	Comp/Grab	Cu	Pb	Ag	Zn	As
			Date	Time							
1		JPLZ-AP139(1)	8/28/07	0700	S	G	X	X	X	X	X
2		AP140(8)		0705	S	G	X	X	X	X	X
3		AP141(1)		0710	S	G	X	X	X	X	X
4		AP142(8)		0715	S	G	X	X	X	X	X
5		AP143(1)		0720	S	G	X	X	X	X	X
6		AP144(8)		0725	S	G	X	X	X	X	X
7		AP145(1)		0730	S	G	X	X	X	X	X
8		AP146(8)		0735	S	G	X	X	X	X	X
9		JPLZ-AP63(12)	8/28/07	0740	S	G	X	X	X	X	X

Additional Analyses / Remarks

Z Day TAT
 BOA: 4016
 WO: 023

RELINQUISHED BY: <u>[Signature]</u>	COMPANY: <u>MWH</u>	DATE: <u>8/28/07</u>	TIME: <u>1600</u>	RECEIVED BY: <u>[Signature]</u>	COMPANY: <u>TAL</u>	DATE: <u>8/28/07</u>	TIME: <u>1400</u>
RELINQUISHED BY: _____	COMPANY: _____	DATE: _____	TIME: _____	RECEIVED BY: _____	COMPANY: _____	DATE: _____	TIME: _____

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Sp d
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 D = _____

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widesmouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8, 28, 07
 Courier: TAL Hand Delivered
 Bill of Lading

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:
 Contact: S. Rosypal / B. Brooks
 Company: nuh
 Address: Joliet
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To:
 Contact: same
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1
Lab Lot# 500-6262

Package Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input type="radio"/>
Temperature °C of Cooler 4.5	
Within Hold Time Yes <input checked="" type="radio"/> No <input type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input type="radio"/> NA
pH Check OK Yes <input checked="" type="radio"/> No <input type="radio"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="radio"/> No <input type="radio"/> NA
Sample Labels and COC Agree Yes <input checked="" type="radio"/> No <input type="radio"/> COC not present	

Sampler Name:		Signature:		Refry #															
Project Name:		Project Number:		Volume															
Project Location:		Data Required		Matrix	Comp/Grab														
Lab PM:		Hard Copy:																	
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab													
1		JPL2-AP147(0.5)	8/28/07	1200	S	G	✓	✓											
2		" AP148(0.5)	"	1205	S	G	✓	✓											

Additional Analyses / Remarks
 2 day TAT
 BOA : 4016
 WD : 023

RELINQUISHED BY [Signature] COMPANY nuh DATE 8/29/07 TIME 1000

RECEIVED BY [Signature] COMPANY TAC DATE 8/29/07 TIME 1405

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O =

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wicemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8/29/07
 Courier: TAC Hand Delivered
 Bill of Lading

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-6262

Client: JoAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1,2	metals	<i>JSA</i>	<i>Lina Pelle</i>	8/30/07	0740	returned with sig 8/31/07

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-6262

Client: JOHNSON

12

08/31/2007

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1.2 1.2	digestion to ICP ILP	Lisa Peelle T. Curran	T. Curran Mr 5-17+	8/30/07 8/2/07	1300 8:45	

Page 39 of 132

**SEVERN
TRENT** **STL**

STL Chicago LOC: 090407
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact: S. FOSCAPA / J. BROOKS
Company: LAWT
Address: JANAY
Phone: 815-473-6841
Fax: _____
E-Mail: _____

Bill To: STL
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1
Lab Lot# 500-6332
Package Sealed (Yes) No
Samples Sealed (Yes) No
Received on Ice (Yes) No
Samples Intact (Yes) No
Temperature °C of Cooler 3.4
Within Hold Time (Yes) No
Preserv. Indicated (Yes) No NA
pH Check OK (Yes) No NA
Res Cl₂ Check OK (Yes) No NA
Sample Labels and COC Agree (Yes) No
COC not present

Sampler Name: Ryan Young
Signature: [Signature]
Project Name: LAF SOIL
Project Number: _____
Project Location: _____
Date Required: _____
Hard Copy: _____
Lab PM: _____
Fax: _____

Refrg #	# / Cont.	Volume	Preserv	Matrix	Comp/Grab	Pb	Tl	Cd	Zn	As	Sb	Cd	Ag	TPH
						X	X	X	X	X	X	X	X	X
						X	X	X	X	X	X	X	X	X
						X	X	X	X	X	X	X	X	X
						X	X	X	X	X	X	X	X	X
						X	X	X	X	X	X	X	X	X
						X	X	X	X	X	X	X	X	X
						X	X	X	X	X	X	X	X	X

Additional Analyses / Remarks
2 DAY TAG
W0.023
BEAL4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 9/4/07 TIME 1300
RECEIVED BY [Signature] COMPANY TAL DATE 09/04/07 TIME 1300

- Matrix Key**
WW = Wastewater
W = Water
S = Sol
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
C =
- Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Wiermouth Glass
6. Other
- Preservative Key**
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received 09, 04, 07
Courier: Hand Delivered [Signature]
Bill of Lading

Page 39 of 129 09/10/2007

STL Chicago 1002090707C
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: E. Raszynski / L.B. Kovacs
Company: MWH
Address: JPL3-77
Phone: 615-423-6241
E-Mail:

Bill To: SAME
Company:
Address:
Phone:
Fax:
PO#: **Quote:**

Shaded Areas For Internal Use Only of 1

Lab Lot# 500-6413

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler 4.0	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name:		Signature:		Ref#																	
Project Name:		Project Number:		# / Cont.																	
Project Location:		Date Required		Volume																	
Lab PM:		Hard Copy:		Preserv																	
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	PCB	VOC	TELUP	SVOC	ICLUP	HEPA METALS	TELUP	Resistivity	Ignitability	833D	PAINT	SALT	TOTAL Phenol	Conductivity	Additional Analyses / Remarks
1		JPL3-PROFITE	9/7/07	1000	S	C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2 DAY TAT
																					WD = 023
																					BOA: 4016

RELINQUISHED BY: <i>[Signature]</i>	COMPANY: MWH	DATE: 9/7/07	TIME: 1000	RECEIVED BY: <i>[Signature]</i>	COMPANY: TAL	DATE: 9/7/07	TIME: 1545
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:

- | | | |
|---|---|---|
| <p>Matrix Key</p> <ul style="list-style-type: none"> WW = Wastewater W = Water S = Soil SL = Sludge MS = Miscellaneous OL = Oil A = Air | <p>Container Key</p> <ul style="list-style-type: none"> SE = Sediment SO = Solid DS = Drum Solid DL = Drum Liquid L = Leachate W = Wipe O = | <p>Preservative Key</p> <ul style="list-style-type: none"> 1. HCl, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. Cool to 4° 7. None |
|---|---|---|

COMMENTS

Date Received: 9/7/07

Courier: TAL Hand Delivered

Bill of Lading

Page 14 of 45

**SEVERN
TRENT** **STL**

STL Chicago *LOC: 090707A*
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:
 Contact: *S. Rodriguez*
 Company: *MWH*
 Address: *JDAAP*
 Phone: *(815) 423-6841*
 Fax:
 E-Mail:

Bill To:
 Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only of
Lab Lot# *500-6419*
 Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on Ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: *4.0*
 Within Hold Time: Yes No
 Preserv. Indicated: Yes No NA
 pH Check OK: Yes No NA
 Res Cl₂ Check OK: Yes No NA
 Sample Labels and CDC Agree: Yes No
 COC not present:

Sampler Name: *RYAN YOUNG*
Signature: *[Signature]*
Project Name: *LAP SOLID*
Project Number:
Project Location:
Lab PM:
Date Required:
 Hard Copy:
 Fax:

Ref#	# / Cont.	Volume	Preserv	Matrix	Comp/Grab	PCB	VOC	TELUR	SDDC	TELUR	PCB PAH METALS TELUR	REACTIVITY	STABILITY	B339	PARTIC FILTER	TOTAL PHENOL	CONDUCTIVITY
						X	X	X	X	X	X	X	X	X	X	X	X

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCB	VOC	TELUR	SDDC	TELUR	PCB PAH METALS TELUR	REACTIVITY	STABILITY	B339	PARTIC FILTER	TOTAL PHENOL	CONDUCTIVITY	Additional Analyses / Remarks
			Date	Time															
<i>1</i>		<i>JPM4-BIODEMO.P001</i>	<i>9/7/07</i>	<i>900</i>	<i>MS</i>	<i>C</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>2 DAY TAT WO: 023 BDA: 4D16</i>

RELINQUISHED BY *[Signature]* COMPANY *MWH* DATE *9/7/07* TIME *1600*
 RECEIVED BY *[Signature]* COMPANY *TAL* DATE *9/7/07* TIME *1445*

- Matrix Key**
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
- SE = Sediment**
 SO = Solids
 DS = Drum Solid
 OL = Drum Liquid
 L = Leachate
 W = Wipe
 O =
- Container Key**
 1. Plastic
 2. VOA Val
 3. Sterile Plastic
 4. Amber Glass
 5. Widenouth Glass
 6. Other
- Preservative Key**
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received *9/7/07*
 Courier: *TAL* Hand Delivered
 Bill of Lading

Page 42 of 43

SEVERN TRENT STL

STL Chicago 602.091107
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: J. Borjesson / B. G...
 Company: MWH
 Address: 1000 N...
 Phone: 815-423-6841
 Fax:
 E-Mail:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Lab Lot# 500-6467
 Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on Ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: 4.0

Sampler Name: RYAN YORNG
 Signature: [Signature]
 Project Name: LAP SDH
 Project Number:
 Project Location:
 Lab PM:
 Date Required:
 Hard Copy: / /
 Fax: / /

Within Hold Time: Yes No
 Preserv. Indicated: Yes No NA
 pH Check OK: Yes No NA
 Res Cl₂ Check OK: Yes No NA
 Sample Labels and COC Agree: Yes No
 COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PL ZS CS AS				
			Date	Time							
1		JPLS-AP48 (0.5)	9/11/07	1000	S	G	Y	X	Y	Y	
2		AP49 (0.5)	↓	1005	S	G	X	X	Y	Y	
3		AP50 (0.5)	↓	1400	S	G	X	X	X		
4		JPLS-AF32(4)	↓	1405	S	G		X	X		

Additional Analyses / Remarks
 2 Day 745
 WD: 023
 QBA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 9/11/07 TIME: 1400
 RECEIVED BY: [Signature] COMPANY: TPL DATE: 9/11/07 TIME: 1430

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SC = Solid
 - CS = Drum Solid
 - OL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: 9/11/07
 Courier: TPL Hand Delivered
 Bill of Lading

SEVERN TRENT STL

STL Chicago
 2417 Bonc Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: <u>S. P. ...</u>	Company: <u>MWH</u>	Address: <u>...</u>	Phone: <u>...</u>	E-Mail: <u>...</u>
Lab Lot# <u>500-6503</u>	Package Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>	Received on Ice Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input type="radio"/>
Temperature °C of Cooler <u>3.9</u>	Within Hold Time Yes <input checked="" type="radio"/> No <input type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input type="radio"/> NA	pH Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA	Res Cl ₂ Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA
Sample Labels and COC Agree Yes <input checked="" type="radio"/> No <input type="radio"/>	COC not present			

Sampler Name:		Signature:		Refr #	# / Cont.	Volume	Preserv	Matrix	Comp/Grab	Additional Analyses / Remarks
RYAN YOUNG		<i>[Signature]</i>								
Project Name:		Project Number:								
LAPSDU										
Project Location:		Date Required								
Lab PM:		Hard Copy: <input type="checkbox"/>								
		Fax: <input type="checkbox"/>								
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab				
1		JPM4-AP63 (S)	9/12/07	800	S	G	X			2 DAY TRF
										WO 023
										BOA 4016

RELINQUISHED BY <i>[Signature]</i>	COMPANY <i>MWH</i>	DATE <u>9/12/07</u>	TIME <u>1400</u>	RECEIVED BY <i>[Signature]</i>	COMPANY <i>TAL</i>	DATE <u>9-12-07</u>	TIME <u>1400</u>
------------------------------------	--------------------	---------------------	------------------	--------------------------------	--------------------	---------------------	------------------

Matrix Key WW = Wastewater W = Water S = Soil SL = Sludge MS = Miscellaneous OL = Oil A = Air SE = Sediment SO = Solid DS = Drum Solid DL = Drum Liquid L = Leachate WI = Waste C =	Container Key 1. Plastic 2. VOA Val 3. Sterile Plastic 4. Amber Glass 5. Wdemouth Glass 6. Other	Preservative Key 1. HCl, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. Cool to 4° 7. None	COMMENTS 	Date Received <u>9/12/07</u> Courier <i>TAL</i> Hand Delivered <input checked="" type="checkbox"/> Bill of Lading
--	---	---	-------------------------	---

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STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. Wisniewski B. B. Boudry
 Company: MWH
 Address: 1500
 Phone: 215-423-6241
 Fax:
 E-Mail:

Bill To: SAME

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only ___ of ___

Lab Lot# 500-6506

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No

10/03/2007

Sampler Name: Ryan Young Signature: [Signature]
 Project Name: LAPSOIL Project Number:
 Project Location: Date Required
 Lab PM: Hard Copy:
 Fax:

Refr #	# / Cont.	Volume	Preserv.	Matrix	Comp/Grab
				PL	CM
				Zn	
				Ag	
				RDX	
				TMB	

Temperature °C of Cooler	Within Hold Time Yes No	Preserv. Indicated Yes No NA
	pH Check OK Yes No NA	Res Cl ₂ Check OK Yes No NA
	Sample Labels and COC Agree Yes No	COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PL	CM	Zn	Ag	RDX	TMB
			Date	Time								
13		JPL3-A12 (2)	9/12/07	1100	S	G	Y	Y	Y	X	Y	Y
14		A13 (4)		1105			Y	Y	X	X	X	X
15		A14 (4)		1110			Y	Y	Y	X	X	X
16		A15 (2)		1115			Y	Y	X	X	X	X
17		A16 (2)		1120			Y	Y	X	X	X	X

Additional Analyses / Remarks
 2 Daily TWT
 WWT 2/3
 BPA/NO16

Page 61 of 242

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 9/12/07 TIME: 1400

RECEIVED BY: [Signature] COMPANY: TAL DATE: 9-12-07 TIME: 1900

Matrix Key
 WW = Wastewater SE = Sediment
 W = Water SO = Solid
 S = Soil DS = Drum Solid
 SL = Sludge CL = Drum Liquid
 MS = Miscellaneous L = Leachate
 OL = Oil WI = Wipe
 A = Air C =

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wide-mouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 9/12/07
 Courier: TAL Hand Delivered
 BRL of Lading

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 506 - 6506

Client: JOAMP

10/03/2007

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-17	digestion to ICP	Lisa Reelike	T. Coth	9/13/07	1500	
1-17	ICP	T. Coth	Kim S. 17-	7/14/07	15:00	

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**SEVERN
TRENT
STL**

STL Chicago 608.509.1207
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. ROSYMAN / B. BROOKS
 Company: MWH
 Address: DOAAV
 Phone: 815.422.6241
 Fax: _____
 E-Mail: _____

Bill To: S.A.P.E.

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 500-6506

Package Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input type="radio"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="radio"/> No <input type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>
pH Check OK Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>	Res Cl ₂ Check OK Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>
Sample Labels and COC Agree Yes <input checked="" type="radio"/> No <input type="radio"/> COC not present	

10/03/2007

Sampler Name:		Signature:		Refr #	# / Cont.	Volume	Preserv	Matrix	Comp/Grab	Additional Analyses / Remarks		
RYAN YOUNG												
Project Name: LAI SOIL		Project Number:										
Project Location:		Date Required										
Lab PM:		Hard Copy: _____ Fax: _____										
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab						
1		JPL3-AP1 (0.5)	9/12/07	1000	S	G	X	X	X	X	X	X
2		AP2 (0.5)		1009			X	X	X	X	X	X
3		AP3 (0.5)		1010			X	X	X	X	X	X
4		AP4 (0.5)		1015			X	X	X	X	X	X
5		AP5 (0.5)		1020			X	X	X	X	X	X
6		AP6 (0.5)		1025			X	X	X	X	X	X
7		AP7 (0.5)		1030			X	X	X	X	X	X
8		AP8 (0.5)		1035			X	X	X	X	X	X
9		AP9 (0.5)		1040			X	X	X	X	X	X
10		AP10 (0.5)		1045			X	X	X	X	X	X
11		AP11 (0.5)		1050			X	X	X	X	X	X
12		AP1 (2)		1055			X	X	X	X	X	X

Page 315 of 318

RELINQUISHED BY	COMPANY <u>MWH</u>	DATE <u>9/12/07</u>	TIME <u>1400</u>	RECEIVED BY	COMPANY <u>TAL</u>	DATE <u>9/12/07</u>	TIME <u>1400</u>
-----------------	--------------------	---------------------	------------------	-------------	--------------------	---------------------	------------------

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OC = Oil
 - A = Air
 - SE = Sec met
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 9/12/07

Courier: TAL Hand Delivered

Bill of Lading



STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. Wisniewski B. B. Edwards
 Company: MWH
 Address: 1500
 Phone: 215-423-6241
 Fax:
 E-Mail:

Bill To: SAME

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only ___ of ___

Lab Lot# 500-6506

Package Sealed		Samples Sealed	
Yes	No	Yes	No
Received on Ice		Samples Intact	
Yes	No	Yes	No

10/03/2007

Sampler Name: Ryan Young Signature: [Signature]
 Project Name: LAPSOIL Project Number:
 Project Location: Date Required
 Lab PM: Hard Copy:
 Fax:

Refr #	# / Cont.	Volume	Preserv

Temperature °C of Cooler		
Within Hold Time	Preserv. Indicated	
Yes	No	NA
pH Check OK	Res Cl ₂ Check OK	
Yes	No	NA
Sample Labels and COC Agree		
Yes	No	COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cu	Zn	Ag	RDX	TMB	Additional Analyses / Remarks
			Date	Time									
13		JPL3-A12 (2)	9/12/07	1100	S	G	Y	Y	Y	X	Y	Y	2 DAY TWT
14		A13 (4)		1105			Y	Y	X	X	X	X	WWT 213
15		A14 (4)		1110			Y	Y	Y	X	X	X	3 DAY TWT
16		A15 (2)		1115			Y	Y	X	X	X	X	
17		A16 (2)		1120			Y	Y	X	X	X	X	

Page 316 of 318

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 9/12/07 TIME: 1100

RECEIVED BY: [Signature] COMPANY: TAL DATE: 9-12-07 TIME: 1900

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wide-mouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 9/12/07
 Courier: TAL Hand Delivered
 BIL of Lading

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-6506

Client: Joanap

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-17	metals	Jodie Brockton	Jim Leath	9/13/07	0800	
1	metals	Jim Leath	Jodie Brockton	9/13/07	1500	
	8376	Analyzed w/o signatures			9/14/07	JP

10/03/2007

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SEVERN TRENT STL

STL Chicago Loc: 091307
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. ROSYPAI / B. Brooks
 Contact: _____
 Company: MWH
 Address: 20007
 Phone: 815-423-6241
 Fax: _____
 E-Mail: _____

Blk To: JAYE
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1
Lab Lot# 500-6513
 Package Sealed Yes No
 Samples Sealed Yes No
 Received on Ice Yes No
 Samples Intact Yes No
 Temperature °C of Cooler 4.3

Sampler Name:		Signature:		Ref #														
<u>RYAN YOUNG</u>		<u>[Signature]</u>		# / Cont.														
Project Name:		Project Number:		Volume														
<u>VAP SOIL</u>		<u>[Signature]</u>		Preserv.														
Project Location:		Date Required		Matrix	Comp/Grab													
Lab PM:		Hard Copy: <u> </u> <u> </u> <u> </u>																
		Fax: <u> </u> <u> </u> <u> </u>																
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time														
<u>1</u>		<u>JPLC-AP51(0.5)</u>	<u>9/13/07</u>	<u>800</u>	<u>S</u>	<u>S</u>	<u>X</u>											

Within Hold Time Yes No
 Preserv. Indicated Yes No NA
 pH Check OK Yes No NA
 Res Cl₂ Check OK Yes No NA
 Sample Labels and COC Agree Yes No
 COC not present

Additional Analyses / Remarks
2 DAN TAT
WU: 023
BOA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 9/13/07 TIME 1600
 RECEIVED BY [Signature] COMPANY TAL DATE 9/13/07 TIME 0945
 RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____
 RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- | | | |
|--|--|---|
| Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SC = Solids
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____ | Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Wide-mouth Glass
6. Other | Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None |
|--|--|---|

COMMENTS
 Date Received 9 / 13 / 07
 Courier: TAL Hand Delivered
 Bill of Lading

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-6513

Client: NYH Americas

09/17/2007

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
	Digestion to GC/MS	<i>[Signature]</i> Beant Karu	<i>[Signature]</i> RM 5-177	9/14/07 9/17/07	8:00 09:00	

Page 28 of 89

Job No: 500-6513

Client: JORAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	% Solids	Jodie Brackem	Paul Kolank	9/13/07	14:20 ^{14:20}	
1	% Solids	Paul Kolank	Jodie Brackem	9/13/07	15:10	
1	Metals	Jodie Brackem	Paul Kolank	9/13/07	15:30	
1	Metals	Paul Kolank	Jodie Brackem	9/13/07	18:40	

SEVERN TRENT STL

STL Chicago *Code: 091407*
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Kocyma / D. Brown
Contact: _____
Company: MWH
Address: Jossap
Phone: 815-423-6244
Fax: _____
E-Mail: _____

Shaded Areas For Internal Use Only

Lab Lot# 500-6550

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.3</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present <input type="checkbox"/>	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Preserv	Refr #	# / Cont.	Volume
			Date	Time						
1		JPLS-APS2(0.5)	9/14/07	1000	S	G	X			

Additional Analyses / Remarks

2. DAM TAF

QDA-2406

WJ: 023

RELINQUISHED BY [Signature] COMPANY MWH DATE 9/14/07 TIME 1200

RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____

RECEIVED BY [Signature] COMPANY TA DATE 9/14/07 TIME 1156

RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SC = Solid
 - OS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Waste
 - C = _____

- Container Key**
1. Plastic
 2. VOA Via
 3. Sterile Plastic
 4. Amber Glass
 5. Wide-mouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 9/14/07

Courier: TAL Hand Delivered

Bill of Lading _____



STL

STL Chicago (630) 697-0700
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Posypal / BBears
 Company: MWH
 Address: 10000
 Phone: 815-423-6141
 Fax:
 E-Mail:

Bill To:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only of
Lab Lot# 500-6592
Package Sealed Yes No
Samples Sealed Yes No
Received on Ice Yes No
Samples Intact Yes No
Temperature °C of Cooler 3.0

Sampler Name: P. Young		Signature: [Signature]		Refrg #																	
Project Name: LAPSOL		Project Number:		# / Cont.																	
Project Location:		Date Required		Volume																	
Lab PM:		Hard Copy: / /		Preserv																	
Lab PM:		Fax: / /		Matrix		Comp/Grab															
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	Pb	Cd	As	Ba	Zn										
1		JPL3-AP12 (1)	9/17/07	1000	S	G	✓	✓	✓	✓	✓										
2		AP13 (1)		1005			✓	✓	✓	✓	✓										
3		AP14 (1)		1010			✓	✓	✓	✓	✓										
4		AP15 (1)		1015			✓	✓	✓	✓	✓										
5		AP16 (1)		1020			✓	✓	✓	✓	✓										
6		AP17 (1)		1025			✓	✓	✓	✓	✓										
7		AP18 (1)		1030			✓	✓	✓	✓	✓										
8		AP19 (1)		1035			✓	✓	✓	✓	✓										
9		AF7 (1)		1040			✓	✓	✓	✓	✓										
10		AF8 (1)		1045			✓	✓	✓	✓	✓										
11		AF9 (1)		1050			✓	✓	✓	✓	✓										
12		AF12 (1)		1055			✓	✓	✓	✓	✓										

Within Hold Time Yes No
Preserv. Indicated Yes No NA
pH Check OK Yes No NA
Res Cl₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No
COC not present

Additional Analyses / Remarks
 2. DAY 1 TAT
 WU 1023
 BDA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 9/17/07 TIME: 1300
 RELINQUISHED BY: [Signature] COMPANY: MWH DATE: TIME:

RECEIVED BY: [Signature] COMPANY: TRIL DATE: 9-17-07 TIME: 1339
 RECEIVED BY: COMPANY: DATE: TIME:

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 DS = Dri. m Solid
 DL = Dri. m Liquid
 L = Leachate
 WI = Wipe
 O =

Container Key
 1. Plastic
 2. WOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wider-mouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 09 / 17 / 07
Courier: Hand Delivered [Signature]
Bill of Lading HG

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Boyington R. Broome Bill To: STL Shaded Areas For Internal Use Only of _____

Contact: _____ Company: _____ Address: _____ Phone: _____ Fax: _____ PO#: _____ Quote: _____

Lab Lot# 500-6592

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>3.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	Res Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name: R. Young Signature: [Signature]

Project Name: LAP SOIL Project Number: _____

Project Location: _____ Date Required: _____
 Lab PM: _____ Hard Copy: _____
 Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cu	As	Ba	Zn	Additional Analyses / Remarks
			Date	Time								
13		JPL3-AF11 (1)	9/17/07	1100	S	G	✓	✓	✓	✓	✓	2-DAY TAG
14		AF12 (1)		1105			✓	✓	✓	✓	✓	
15		AF13 (1)		1110			✓	✓	✓	✓	✓	W.D.: 023
16		AF14 (1)		1115			✓	✓	✓	✓	✓	
17		AF15 (2)		1120			✓	✓	✓	✓	✓	BOA: 4.016
18		AF16 (2)		1125			✓	✓	✓	✓	✓	

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 9/17/07 TIME: 3:00

RECEIVED BY: [Signature] COMPANY: TAL DATE: 9-17-07 TIME: 13:38

Matrix Key: WW = Wastewater, W = Water, S = Soil, SL = Sludge, MS = Miscellaneous, OL = Other, SE = Sediment, SC = Solid, OS = Drum Solid, OL = Drum Liquid, L = Leachate, W = Wipe, O = _____

Container Key: 1. Plastic, 2. WOA Vial, 3. Sterile Plastic, 4. Amber Glass, 5. Widemouth Glass, 6. Other

Preservative Key: 1. HCl, Cool to 4°, 2. H2SO4, Cool to 4°, 3. HNO3, Cool to 4°, 4. NaOH, Cool to 4°, 5. NaOH/Zn, Cool to 4°, 6. Cool to 4°, 7. None

COMMENTS: _____

Date Received: 09/17/07

Courier: _____ Hand Delivered: [Signature]

Bill of Lading: _____

SEVERN TRENT STL

STL Chicago 606091807B
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Pappas / U. Brooks
 Contact: _____
 Company: AMWL
 Address: 20447
 Phone: 615-423-6241
 Fax: _____
 E-Mail: _____

Bill To: SAL
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PC#: _____ Quote: _____

Shaded Areas For Internal Use Only of _____
 Lab Lot# 500-6622
 Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on Ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: 3.9

Sampler Name:		Signature:		Refr #															
<u>R. Young</u>		<u>[Signature]</u>		# / Cont.															
Project Name:		Project Number:		Volume															
<u>LAP SOIL</u>		<u>[Signature]</u>		Preserv															
Project Location:		Date Required		Matrix	Comp/Grab														
Lab PM:		Hard Copy: _____ Fax: _____																	
Laboratory ID	MS-MSD	Client Sample ID	Date	Time	Matrix	Comp/Grab													
1		JPM3-AF1 (2)	9/10/07	900	S	G													
2		AF6 (2)		905															
3		AF7 (2)		910															
4		AF8 (2)		915															
5		JPM3-CV-AP1 (0.5)		920															
6		AP2 (0.5)		925															
7		AP3 (0.5)		930															
8		AP4 (0.5)		935															
9		AF1 (2)		940															

Within Hold Time: Yes No
 Preserv. Indicated: Yes No NA
 pH Check OK: Yes No NA
 Res Cl₂ Check OK: Yes No NA
 Sample Labels and COC Agree: Yes No
 COC not present:
 Additional Analyses / Remarks: _____

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 9/10/07 TIME: 1600

RECEIVED BY: [Signature] COMPANY: TAL DATE: 9/10/07 TIME: 1510

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = S. Ledge
 - MS = Miscellaneous
 - OL = O
 - A = A
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HC, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS: _____

Date Received: 9/10/07
 Courier: TAL Hand Delivered
 Bill of Lading: _____

SEVERN TRENТ STL

STL Chicago GSC: 091907B
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report to: S. Pappas / B. Brooks
 Contact: _____
 Company: MWLT
 Address: JDAAP
 Phone: 618-423-6841
 Fax: _____
 E-Mail: _____

Bill to: SALMO
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1
Lab Lot# 500-6650
 Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: 4.2

Sampler Name: R-YOUNG Signature: [Signature]
 Project Name: LAP SOIL Project Number: _____
 Project Location: _____ Date Required: _____
 Lab PM: _____ Hard Copy: _____
 Fax: _____

Refr # _____
 # / Cont. _____
 Volume _____
 Preserv _____
 Within Hold Time: Yes No
 Preserv. Indicated: Yes No NA
 pH Check OK: Yes No NA
 Res Cl₂ Check OK: Yes No NA
 Sample Labels and COC Agree: Yes No
 COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cr	Cu	8330	Additional Analyses / Remarks
			Date	Time							
1		JPL3-AP24 (0.5)	9/19/07	1200	S	G	X	X	X	X	2 DAY TAR WO: 023 BDA: 4016
2		AP25 (0.5)		1205			X	X	X	X	
3		AP26 (0.5)		1210			X	X	X	X	
4		AP27 (0.5)		1215			X	X	X	X	
5		AP28 (0.5)		1220			X	X	X	X	
6		AP29 (0.5)		1225			X	X	X	X	
7		AF21 (1)		1230			X	X	X	X	
8		AF22 (1)		1235			X	X	X	X	
9		AF23 (1)		1240			X	X	X	X	
10		AF24 (1)		1245			X	X	X	X	

RELINQUISHED BY: [Signature] COMPANY: MWLT DATE: 9/19/07 TIME: 1255
 RECEIVED BY: [Signature] COMPANY: JDA DATE: 9/19/07 TIME: 1440
 RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____
 RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WL = Wipe
 O = _____

- Container Key**
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wide mouth Glass
 6. Other
- Preservative Key**
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: 9, 19, 07
 Courier: JAL Hand Delivered
 Bill of Lading

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: J. ROSSY, JR. B. BEHREND
 Contact: _____
 Company: MWH
 Address: 10000
 Phone: 815-402-6241
 Fax: _____
 E-Mail: _____

Bill To: S.A.M.
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only of _____
Lab Lot# 500-6607

Package Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature °C of Cooler <u>4.0</u>	

09/24/2007

Sampler Name: <u>R Young</u>		Signature: <u>R Young</u>		Refr #															
Project Name: <u>LAPSOIL</u>		Project Number:		# / Cont.															
Project Location:		Date Required		Volume															
Lab PM:		Hard Copy: <u> </u>		Preserv															
Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PB												
			Date	Time															
<u>1</u>		<u>JPM4 - AP64 (1-S)</u>	<u>9/20/07</u>	<u>800</u>	<u>S</u>	<u>M</u>	<u>X</u>												

Within Hold Time Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> COC not present	

Additional Analyses / Remarks

2 DAY TAT

WD: 023

BOA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 9/20/07 TIME 1130

RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____

RECEIVED BY [Signature] COMPANY TAL DATE 9/20/07 TIME 1430

RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

Matrix Key

WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air

SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O = _____

Container Key

1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key

1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 9, 20, 07

Courier: TAL Hand Delivered

Bill of Lading

STL Chicago LOC:092107B
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. POSY PAI | B.B. BOOKS
Company: MWHT
Address: JOANN
Phone: 815-423-6841
E-Mail:

Bill To: SAME
Contact:
Company:
Address:
Phone:
Fax:
PO#: _____ Quote: _____

Shaded Areas For Internal Use Only _____ of _____

Lab Lot# 500-6713

Package Sealed Yes (No) No	Samples Sealed Yes (No) No
Received on Ice Yes (No) No	Samples Intact Yes (No) No

Temperature °C of Cooler: 3.9

Within Hold Time
Yes (No) No

Preserv. Indicated
Yes (No) NA

pH Check OK
Yes (No) NA

Res Cl₂ Check OK
Yes (No) NA

Sample Labels and COC Agree
Yes (No) No

COC not present

10/15/2007

Sampler Name:	Signature:	Refg #																
Project Name:	Project Number:	# / Cont.																
Project Location:	Date Required	Volume																
Lab PM:	Hard Copy: / /	Preserv																
		Matrix	Comp/Grab															
R. YOUNG	[Signature]	8330	PCB	PEE PA-B	METAL	VOC / SVOC												
LAP SOIL																		

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	8330	PCB	PEE PA-B	METAL	VOC / SVOC	Additional Analyses / Remarks					
		JPL3-CONCRETE	9/21/07	1000	O	C	X	X	X	X	X	2 DAY TAE					
												WO: 023					
												BOA: 4016					

RELINQUISHED BY [Signature]	COMPANY MWHT	DATE 9/21/07	TIME 1200	RECEIVED BY [Signature]	COMPANY TA	DATE 9/21/07	TIME 1348
RELINQUISHED BY [Signature]	COMPANY	DATE	TIME	RECEIVED BY [Signature]	COMPANY	DATE	TIME

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
- SE = Sewer**
- SC = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Wipe
 - O = CONCRETE

- Container Key**
- 1. Plastic
 - 2. VOA Vial
 - 3. Sterile Plastic
 - 4. Amber Glass
 - 5. Widemouth Glass
 - 6. Other

- Preservative Key**
- 1. HCl, Cool to 4°
 - 2. H2SO4, Cool to 4°
 - 3. HNO3, Cool to 4°
 - 4. NaOH, Cool to 4°
 - 5. NaOH/Zn, Cool to 4°
 - 6. Cool to 4°
 - 7. None

COMMENTS

Date Received	9, 21, 07
Courier: TAL	Hand Delivered <input type="checkbox"/>
Bill of Lading	

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-6713

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	8260	JL	Coles	9/21/07	1550	
1	ag	JL	JL	09/25/02	1006	
1	ag	JL	JL	09/25/02	1520	
	metals	obtained + returned w/ sig recorded 10/1/07				

Page 632 of 634 10/15/2007

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: S00-6713

Client: JOAMP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	digestion to ICP ICP	[Signature]	[Signature]	9/24/07	1400	
			RS-177	9/26/07	11:00	

SEVERN TREN **STL**

STL Chicago 02:092407
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Rosypa / Brooks
 Contact: MWH
 Company: 10000
 Address: 815-423-6201
 Phone: 815-423-6201
 Fax:
 E-Mail:

Bin To: SAMR
 Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1
Lab Lot# 500-6743

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler 3.2	

Sampler Name:		Signature:		Refr #															
Project Name:		Project Number:		# / Cont.		Volume		Preserv		Matrix		Comp/Grab							
Project Location:		Date Required		Hard Copy:		Date		Time		Matrix		Comp/Grab							
Lab PM:		Date Required		Hard Copy:		Date		Time		Matrix		Comp/Grab							
Laboratory ID	MS-MSD	Client Sample ID		Date	Time	Matrix	Comp/Grab												
1		JPL3-AP33 (0.5)		9/24/07	1000	S	G	X											

Within Hold Time Yes No	Preserv. Indicated Yes No NA
pH Check OK Yes No NA	Res Cl ₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No COC not present	
Additional Analyses / Remarks	
2 DAY TAT	
WD: 021	

RELINQUISHED BY: KS COMPANY: MWH DATE: 9/24/07 TIME: 1400

RECEIVED BY: [Signature] COMPANY: TA DATE: 9/24/07 TIME: 1415

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - D = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
- 1. Plastic
 - 2. VOA Vial
 - 3. Sterile Plastic
 - 4. Amber Glass
 - 5. Wide-mouth Glass
 - 6. Other
- Preservative Key**
- 1. HC, Cool to 4°
 - 2. H2SO4, Cool to 4°
 - 3. HNO3, Cool to 4°
 - 4. NaOH, Cool to 4°
 - 5. NaOH/Zn, Cool to 4°
 - 6. Cool to 4°
 - 7. None

COMMENTS

Date Received: 09/24/07

Courier: Hand Delivered

Bill of Lading: [Signature]

**SEVERN
TRENT** **STL**

STL Chicago *CSL: 091907B*
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report to: *S. Rajan / B. Brooks*
 Contact: _____
 Company: *MWLT*
 Address: *Joliet*
 Phone: *815-423-6844*
 Fax: _____
 E-Mail: _____

Bill to: *same*
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1
 Lab Lot# *500-6650-200-6718*
 Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on Ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: *4.2*

Sampler Name:		Signature:		Ref#																
Project Name:		Project Number:		# / Cont.																
Project Location:		Date Required		Volatiles																
Lab P/N:		Hard Copy:		Preserv																
Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cu	Cd	R330										
			Date	Time																
1		JPL3-AP24(0.5)	9/19/07	1200	S	G	Y	X	X	Y										
		AP25(0.5)		1205			Y	X	X	Y										
		AP26(0.5)		1210			X	X	X	Y										
		AP27(0.5)		1215			X	X	X	Y										
2		AP28(0.5)		1220			Y	X	Y	X										
		AP29(0.5)		1225			Y	X	X	Y										
		AF21(1)		1230			X	X	X	X										
		AF22(1)		1235			X	X	X	X										
		AF23(1)		1240			X	X	X	X										
		AF24(1)		1245			X	X	X	X										

Within Held Time: Yes No
 Preserv. Indicated: Yes No NA
 pH Check OK: Yes No NA
 Res Cl₂ Check OK: Yes No NA
 Sample Labels and CDC Agree: Yes No
 CDC not present

Additional Analyses / Remarks

2 DAY TAT
WD: 023
BDA: 4016

RELINQUISHED BY *Rajan* COMPANY *MWLT* DATE *9/19/07* TIME *1255* RECEIVED BY *[Signature]* COMPANY *JPL* DATE *9/19/07* TIME *1449*
 RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____ RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
 WW - Wastewater
 W - Water
 S - Soil
 SL - Sludge
 MS - Miscellaneous
 OL - Oil
 A - Air
- SE - Sediment**
 SO - Silt
 DS - Drum Solid
 DL - Drum Liquid
 L - Leachate
 WI - Wipe
 O -
- Container Key**
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wide-mouth Glass
 6. Other
- Preservative Key**
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received *9, 19, 07*
 Courier: *JAL* Hand Delivered
 Bill of Lading

Page 35 of 120

09/28/2007

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. R. ...
Contact: 5-2044...
Company: MWH
Address: ...
Phone: 847-623-2644
Fax: ...
E-Mail: ...

Bill To: ...
Contact: ...
Company: ...
Address: ...
Phone: ...
Fax: ...
PO#: ... Quote: ...

Shaded Areas For Internal Use Only of _____

Lab Lot# 500-6592-11

Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Temperature °C of Cooler
3.0

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cu	As	Ba	Zn	Preserv
			Date	Time								
<u>13R</u>		<u>JPL3-AF11 (1)</u>	<u>9/17/07</u>	<u>1100</u>	<u>S</u>	<u>G</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	
<u>14</u>		<u>AF12 (1)</u>	<u>1</u>	<u>1105</u>	<u>↓</u>	<u>↓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	
<u>15</u>		<u>AF13 (1)</u>		<u>1110</u>	<u>↓</u>	<u>↓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	
<u>16</u>		<u>AF14 (1)</u>		<u>1115</u>	<u>↓</u>	<u>↓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	
<u>17</u>		<u>AF15 (2)</u>		<u>1120</u>	<u>↓</u>	<u>↓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	
<u>18</u>		<u>AF16 (2)</u>	<u>↓</u>	<u>1125</u>	<u>↓</u>	<u>↓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	

Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
pH Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Res Cl ₂ Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Sample Labels and COC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> COC not present	

Additional Analyses / Remarks
2-DAY TAG
W.D.: 023
BOUND 16

RELINQUISHED BY <u>[Signature]</u>	COMPANY <u>MWH</u>	DATE <u>9/17/07</u>	TIME <u>3:00</u>	RECEIVED BY <u>[Signature]</u>	COMPANY <u>TAL</u>	DATE <u>9/17/07</u>	TIME <u>1:38</u>
------------------------------------	--------------------	---------------------	------------------	--------------------------------	--------------------	---------------------	------------------

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SS = Sediment
 - SG = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - W = Wipe
 - O =

- Container Key**
1. Plastic
 2. WOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 09/17/07
Counter: _____ Hand Delivered: [Signature]
Bill of Lading _____

09/28/2007
Page 31 of 114

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 506-6751

Client: North Americas

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	Digestion to TSP	[Signature]	T. [Signature]	9/27/07	8:50	
1	ICP	[Signature]	PN 5-172	9/28/07	1200	

SEVERN TRENT STL

STL Chicago *COC: 092707A*
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: *S. Rosypal / B. Brooks*
 Contact: *MWH Field Office*
 Company: _____
 Address: _____
 Phone: *815-423-6841*
 Fax: *Suzanne.Rosypal@*
 E-Mail: *mwhglobal.com*

Bill To: *same*
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1
 Lab Lot# *500-6812*
 Package Sealed Yes No
 Samples Sealed Yes No
 Received on Ice Yes No
 Samples Intact Yes No
 Temperature °C of Cooler *4.0*
 Within Hold Time Yes No
 Preserv. Indicated Yes No NA
 pH Check OK Yes No NA
 Res Cl, Check OK Yes No NA
 Sample Labels and COC Agree Yes No
 COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Cu	Zn	Pb	Ba	As	Ref #	#/Cont.	Volume	Preserv	Signature	Project Name	Project Number	Date Required	Hard Copy	Lab P#	Project Location
			Date	Time																		
1		JPL3-AP34 (0.5)	9/27/07	0730	S	G	X									<i>[Signature]</i>	LAP Soils				Wilmington IL	
2		AP35 (0.5)		0735	S	G	X	X														Dick Wright
3		AP36 (0.5)		0740	S	G	X		X													
4		AP37 (0.5)		0745	S	G	X	X	X	X												
5		AF25 (2)		0750	S	G	X	X	X	X	X											
6		AF26 (2)		0755	S	G	X	X	X	X	X											
7		AF27 (2)		0800	S	G	X	X														

Additional Analyses / Remarks
JOAP LAP
BOA4016 WO 023
TAT: 2 day

RELINQUISHED BY *[Signature]* COMPANY *MWH* DATE *9.27.07* TIME *1600*

RECEIVED BY *[Signature]* COMPANY *[Signature]* DATE *9.27.07* TIME *1220*

Matrix Key
 WW = Wastewater SE = Sediment
 W = Water SO = Solid
 S = Soil DS = Drum Solid
 SL = Sludge DL = Drum Liquid
 MS = Miscellaneous L = Leachate
 OL = Oil WI = Wipe
 A = Air O = _____

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wide-mouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS
Follow LCG

Date Received *9/27/07*
 Courier: *TAL* Hand Delivered
 Bill of Lading

Page 39 of 148

SEVERN TRENT STL

STL Chicago 000100207
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report to: S. Posypala | B. Brooks
 Company: MWH
 Address: JORDY
 Phone: 815-423-6841
 Fax:
 E-Mail:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Lab Lot# 500-6900
 Package Sealed Yes No
 Samples Sealed Yes No
 Received on Ice Yes No
 Samples Intact Yes No
 Temperature °C of Cooler 4.0
 Within Hold Time Yes No
 Preserv. Indicated Yes No NA
 pH Check OK Yes No NA
 Res Cl₂ Check OK Yes No NA
 Sample Labels and COC Agree Yes No
 COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Preserv	Refrg #	# / Cont.	Volume	Preserv
			Date	Time							
1		JPL2-CP95(0.5)	10/2/07	1000	S	G	X				
2		CP96(0.5)		1005			X				
3		CP97(0.5)		1010			X				X
4		CP98(0.5)		1015			X				X

Additional Analyses / Remarks
 2 DAY TAT
 WD: 023
 BOA: 4016

RELINQUISHED BY: *[Signature]* COMPANY: MWH DATE: 10/2/07 TIME: 1120

RECEIVED BY: *[Signature]* COMPANY: TRL DATE: 10/2/07 TIME: 1245

Matrix Key
 WW = Wastewater SE = Sediment
 W = Water SO = Solid
 S = Soil DS = Drum Solid
 SL = Sludge DL = Drum Liquid
 MS = Miscellaneous L = Leachate
 OL = Oil WI = Wipe
 A = Air O =

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wide-mouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS
 Date Received 10, 2, 07
 Courier: TRL Hand Delivered
 Bill of Lading

STL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-6900

Client: MYH Americas

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-4	Digestion to ICP	J. Curly	J. Curly	10/3/07	8:00	
1-4	ICP	J. Curly	Mr S-177	10/3/07	15:30	

W

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-6900

Client: AAJ Soap

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments	
1-2	Metals	<i>[Signature]</i>	<i>[Signature]</i>	10/2/07	15:25		
1-4	Metals	<i>[Signature]</i>	<i>[Signature]</i>	10/2/07	17:30		
	Exp	samples obtained & returned w/o signature				10/22/07	PMB

SEVERN
TRENT
STL

STL Chicago LOC11002-07
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Contact: S. Pasupathi b. Pasupathi
Company: MWH
Address: JBRAY
Phone: 812-423-6841
Fax: _____
Email: _____

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
Quote: _____

Lab Lot# 500-6900 7025
Package Sealed: Yes No
Samples Sealed: Yes No
Exposure on Ice: Yes No
Samples Intact: Yes No
Temperature °C of Cooler: 4.0

Sampler Name: RYAN YOUNG Signature: [Signature]
Project Name: LAP 501L Project Number: _____
Project Location: _____ Date Required: _____
Lab Pkt: _____ Hard Copy: Fax:

Laboratory ID	Client Sample ID	Sampling Date	Matrix	Comp/Grab	Matrix		TNT (8330)	Pb
					Volume	Preserv		
1	JPL2-CP95 (O.S)	10/26/07	S	G			X	
2	CP96 (O.S)	1005					X	
3	CP97 (O.S)	1010					X	
4	CP98 (O.S)	1015					X	

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 10/26/07 TIME: 1120
RECEIVED BY: [Signature] COMPANY: [Signature] DATE: 10/26/07 TIME: 1245

Matrix Key:
SE = Sediment
SD = Solid
ES = Duv'n Solid
EL = Duv'n Liquid
L = Leachate
WI = Wipe
O = Other

Container Key:
1. Plastic
2. VOA Vial
3. Sealed Plastic
4. Air-Per Glass
5. W/underOUTH Glass
6. Other

Preservative Key:
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:
Date Received: 10/26/07
Counter: TRL Hand Delivered:
Bill of Lading

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-7025

Client: JBANC

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-3	metals	MA	Don Parks	10/19/07	1315	returned to lab

STL Chicago Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-7025

Client: MPL MILLERS

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
13	Quastantur	P. Kelly	J. S. S. H. S. H.	10/11/07	8:00	
1-3	Ice	f. S. H.	M. S. - 192	10/12/07	08:05	

CHI-22-11-019/A-12/02

SEVERN
TRENT

STL

STL Chicago COC#K00807

2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Sampler Name: *P. Fuessler*

Project Name: *BIO-DEMO*

Project Location:

Lab P/N:

Laboratory ID: MS-MSD

Client Sample ID: *JPM4-DEMO DEBRIS - 100507*

Sampling Date: *10/2/07* Time: *9:00*

Matrix: *0 G V V*

Comp/Grab: *8334*

Pb: *Pb*

RELINQUISHED BY: *[Signature]*
COMPANY: *MWH*
DATE: *10/2/07* TIME: *1000*

Report To: *S Kosyov / 156 Broadbill To: Same*

Contact: *MWH*
Company: *JOHNS FIELD OFFICE*
Address: _____
Phone: *815-423-6844*
Fax: _____
E-Mail: _____

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# *500-7026*

Package Sealed: *Yes* / No
Received in Ice: *Yes* / No
Temperature °C of Cooler: *2.8*

Within Hold Time: *Yes* / No
pH Check OK: *Yes* / No
Sample Labels and COC Agree: *Yes* / No

Preserv. Indicated: *Yes* / No
Res. Cl. Check OK: *Yes* / No
COC not present: *Yes* / No

Additional Analyses / Remarks

Laboratory ID	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	Pb	Additional Analyses / Remarks
	<i>JPM4-DEMO DEBRIS - 100507</i>	<i>10/2/07</i>	<i>9:00</i>	<i>0 G V V</i>	<i>8334</i>	<i>Pb</i>	<i>JOHNS BIO DEMO</i>
							<i>2 DAY TAT</i>
							<i>BOA 4016</i>
							<i>100 023</i>

RECEIVED BY: *[Signature]* DATE: *10/2/07* TIME: *1050*
COMPANY: *[Signature]*

COMMENTS: _____

Date Received: *10 / 08 / 07* Hand Delivered: *[Signature]*
Counter: _____ Bill of Lading: _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MIS = Miscellaneous
 - OL = Oil
 - A = Air
- SE** = Sediment
SO-S = Solid
DS = Durn Solid
DL = Durn Liquid
L = Leadate
WI = Wipe
O = *concrete*
- Container Key:**
1. Plastic
 2. WOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wilmouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

**SEVERN
TRENT**

STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact: S. Rosopal / B. Brooks
Company: MWH
Address: Wilmington FL
Phone: 915-423-6811
Fax: _____
E-Mail: _____

Bill To:
Contact: Same
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____
Quote: _____

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Project Name:
LP Soil

Project Location:

Sampler Name:
David Schmidt

Signature:
[Signature]

Project Number:

Lab P/N:

Date Required:
Hard Copy: _____
Fax: _____

Laboratory ID:
MS MSD

Client Sample ID:
1 JPL3 - SP1 (0.5)
2 SP2 (0.5)
3 SP3 (0.5)
4 SP4 (0.5)
5 SP5 (0.5)
6 SP6 (0.5)

Sampling Date:
10/9/07

Matrix:
Comp/Grab: 8330
Pb
Cu
As
Ba
Zn
Cr
Ag

Additional Analyses / Remarks:
BOA: 4016
W0: 023
2 day TAT

Laboratory ID	Client Sample ID	Sampling Date	Matrix	Comp/Grab	Pb	Cu	As	Ba	Zn	Cr	Ag
1	JPL3 - SP1 (0.5)	10/9/07	S	G	✓	✓	✓	✓	✓	✓	✓
2	SP2 (0.5)	✓	S	G	✓	✓	✓	✓	✓	✓	✓
3	SP3 (0.5)	✓	S	G	✓	✓	✓	✓	✓	✓	✓
4	SP4 (0.5)	✓	S	G	✓	✓	✓	✓	✓	✓	✓
5	SP5 (0.5)	✓	S	G	✓	✓	✓	✓	✓	✓	✓
6	SP6 (0.5)	✓	S	G	✓	✓	✓	✓	✓	✓	✓

Matrix Key:
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
DL = Oil
A = Air

Container Key:
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widenouth Glass
6. Other

Preservative Key:
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

RECEIVED BY: [Signature] **DATE:** 10/9/07 **TIME:** 15:00
RECEIVED BY: [Signature] **DATE:** 10/9/07 **TIME:** 15:00
COMMENTS:
Date Received: 10/9/07 Hand Delivered:
Carrier: TAL Bill of Lading: _____

SEVERN
TRENT

STL

STL Chicago
2417 Bond Street
University Park, IL 60456
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact: Suzanne Casper
Company: MWt Constructors
Address: 2401 S. 1st St
Milwaukee IL 60681
Phone: (815) 423-6844
Fax: _____
E-Mail: Suzanne.Casper@mwconstructors.com

Bill To:
Contact: Brian Brooks
Company: MWt
Address: _____
Phone: 248 449 2438
Fax: _____
Quote: _____

Lab Lot# 500-7145

Package Sealed	Yes (No)	Samples Sealed	Yes (No)
Received on Ice	Yes (No)	Samples Intact	Yes (No)
Temperature °C of Cooler	3.6		
Within-Hold Time	Yes (No)	Preserv. Indicated	Yes (No) NA
pH Check OK	Yes (No) NA	Res C ₂ Check OK	Yes (No) NA
Sample Labels and COC Agree	Yes (No)	COC not present	Yes (No)

Sampler Name: Andrews Johnson
Signature: [Signature]
Project Name: _____
Project Number: _____

Project Location: _____
Lab Pkt: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Laboratory ID	GPM SW	Client Sample ID	Sampling Date	Matrix	Comp/Grab	Notes	Volume	Preserv	Temperature °C	Within-Hold Time	Preserv. Indicated	pH Check OK	Res C ₂ Check OK	Sample Labels and COC Agree	COC not present	Additional Analyses / Remarks	
																	Method
1		1004 Post-S&I NW	10/12/07 1315	S C	V												
2		1004 Post-S&I NW	10/12/07 1345	S C	V												
3		1004 Post-S&I SW	10/12/07 1330	S C	V												
4		1004 Post-S&I SE	10/12/07 1400	S C	V												

RELINQUISHED BY [Signature] COMPANY MWt DATE 10/12/07 TIME 1442
RECEIVED BY [Signature] COMPANY MWt DATE 10/12/07 TIME 1450

Matrix Key
SE = Sediment
SC = Solid
S = Soil
SL = Sludge
MS = Miscellaneous
W = Wastewater
WL = Water
W = Soil
SL = Sludge
MS = Miscellaneous
W = Wastewater
WL = Water

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Wide-mouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

Date Received 10/12/07 Hand Delivered
Courier: TAL
Bill of Lading

**SEVERN
TRENT
STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: 4. Rosipal / B. Brooks
Company: MWH
Address: Wilmette, IL
Phone: 815-423-6841
Fax: _____
E-Mail: _____

Contract: Same
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____
Date: _____

Shaded Areas For Internal Use Only 6 of 1
Lab Lot# 500-7647-7162
Package Sealed: Yes No
Recapped on Ice: Yes No
Temperature 0 of Cooler: 42
With in Hold Time: Yes No
pH Check OK: Yes No
Sample Labels and COC Agrees: Yes No
COC not present: Yes No
Preserv. Indicated: Yes No
Res Etz Check OK: Yes No
Samples Sealed: Yes No
Samples Initialed: Yes No

Sampler Name: David Schmidt
Signature: [Signature]
Project Name: APP Soil
Project Number: _____
Project Location: _____
Date Received: _____
Hard Copy: _____
Fac: _____

Laboratory ID	Client Sample ID	Sampling Date	Matrix	Comp/Grab	Elements							
					Pb	Cu	As	Ba	Zn	Cr	Ag	
	JPL3 - SP1(0.5)	10/9/07	S	8330	✓	✓	✓	✓	✓	✓	✓	✓
	SP2(0.5)		S		✓	✓	✓	✓	✓	✓	✓	✓
	SP3(0.5)		S		✓	✓	✓	✓	✓	✓	✓	✓
	SP4(0.5)		S		✓	✓	✓	✓	✓	✓	✓	✓
	SP5(0.5)		S		✓	✓	✓	✓	✓	✓	✓	✓
	SP6(0.5)		S		✓	✓	✓	✓	✓	✓	✓	✓

Additional Analyses / Remarks
BOA: 4016
LPO: 023
2 day TAT

RECEIVED BY: [Signature] DATE: 10/9/07 TIME: 15:00
RECEIVED BY: [Signature] DATE: 10/9/07 TIME: 15:00
COMPANY: MWH

Matrix Key:
SE - Sediment
SD - Solid
DS - Dirm Solid
DL - Dirm Liq. d
L - Leachate
WM - Waste
G - Other

Container Key:
1. Plastic
2. HDX Vial
3. Sealed Plastic
4. Amber Glass
5. Watertough Glass
6. Other

Preservative Key:
1. HCl Cool to 4°
2. H2SO4 Cool to 4°
3. HNO3 Cool to 4°
4. NaOH Cool to 4°
5. NaOH/Zn Cool to 4°
6. Cool to 4°
7. None

COMMENTS: _____

Date Received: 10/9/07 Hand Delivered:
Courier: TR Bill of Lading: _____

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 500-7607

Client: STAAE

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	Agitation to IOL	J. Padilla	T. CAH	11/2/07	1400	
1	IOL	T. CAH	KAJ-184	11/2/07	08:00	

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street **COC: 070606A**
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact: S. Posypal / B. Brooks
Company: MWH
Address: Job at Field office
Phone: 815 423 6841
Fax:
E-Mail:

Bill To:
Contact: same
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only / of 2
Lab Lot# 247532
Package Sealed: Yes No
Samples Sealed: Yes No
Received on Ice: Yes No
Samples Intact: Yes No
Temperature °C of Cooler: 44
Within Hold Time: Yes No
Preserv. Indicate: Yes No NA
pH Check OK: Yes No NA
Res Cl. Check OK: Yes No NA
Sample Labels and COC Agree: Yes No
COC not present

Sampler Name:		Signature:		Refr. #	# / Cont.	Volume	Preserv.	Matrix	Comp/Grab										
<u>Jared Schmidt</u>		<u>[Signature]</u>						<u>PAH</u>											
Project Name:		Project Number:																	
<u>LAP Soil</u>																			
Project Location:		Date Required																	
Lab PM:		Hard Copy:																	
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	Preserv.												
1		<u>JPM3-ITF-CP1(0.5)</u>	<u>7/6/06</u>	<u>1300</u>	<u>S</u>	<u>G</u>	<input checked="" type="checkbox"/>												
2		<u>CP2(0.5)</u>		<u>1305</u>	<u>S</u>	<u>G</u>	<input checked="" type="checkbox"/>												
3		<u>CP3(0.5)</u>		<u>1310</u>	<u>S</u>	<u>G</u>	<input checked="" type="checkbox"/>												
4		<u>CP4(0.5)</u>		<u>1315</u>	<u>S</u>	<u>G</u>	<input checked="" type="checkbox"/>												
5		<u>CP5(0.5)</u>		<u>1320</u>	<u>S</u>	<u>G</u>	<input checked="" type="checkbox"/>												
6		<u>CP6(0.5)</u>		<u>1325</u>	<u>S</u>	<u>G</u>	<input checked="" type="checkbox"/>												
7		<u>CP7(0.5)</u>		<u>1330</u>	<u>S</u>	<u>G</u>	<input checked="" type="checkbox"/>												
8		<u>CP8(0.5)</u>		<u>1335</u>	<u>S</u>	<u>G</u>	<input checked="" type="checkbox"/>												
9		<u>CP9(0.5)</u>		<u>1340</u>	<u>S</u>	<u>G</u>	<input checked="" type="checkbox"/>												
10		<u>CP10(0.5)</u>		<u>1345</u>	<u>S</u>	<u>G</u>	<input checked="" type="checkbox"/>												
11		<u>CP11(0.5)</u>		<u>1350</u>	<u>S</u>	<u>G</u>	<input checked="" type="checkbox"/>												
12		<u>CP12(0.5)</u>		<u>1355</u>	<u>S</u>	<u>G</u>	<input checked="" type="checkbox"/>												

Additional Analyses / Remarks
2 day TAT
BOA: 4016
WO: 023

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 7/6/06 TIME: 1:50P

RECEIVED BY: [Signature] COMPANY: STL DATE: 7/6/06 TIME: 1620

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WL = Wipe
O =

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received: 7, 6, 106
Courier: STL Hand Delivered:
Bill of Lading

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. Rosypal / B. Brooks
 Company: MWH
 Address: Solret Field Office
 Phone: _____
 Fax: _____
 E-Mail: _____

Bill To:

Contact: same
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 2 of 2

Lab Lot# <u>247532</u>	
Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. Indicator Yes No NA
pH Check OK Yes No NA	Res Cl. Check OK Yes No NA
Sample Labels and COC Agree Yes No COC not present	

Sampler Name: Jared Schmitt **Signature:** [Signature]
Project Name: LAP - Soil **Project Number:** _____
Project Location: _____ **Date Required:** _____
Lab PM: _____ **Hard Copy:** _____
Fax: _____

Refr #	Vol	Preserv	Matrix	Comp/Grab
			PAH	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PAH
			Date	Time			
13		JPM3-ITF-CP13(0.5)	7/6/06	1400	S	G	✓
14		CP14(0.5)		1405	S	G	✓
15		CP15(0.5)		1410	S	G	✓
16		CP16(0.5)		1415	S	G	✓
17		CP17(0.5)		1420	S	G	✓
18		CP18(0.5)		1425	S	G	✓
19		CP19(0.5)		1430	S	G	✓
20		CP20(0.5)		1435	S	G	✓
21		CP21(0.5)		1440	S	G	✓
22		CP22(0.5)		1445	S	G	✓
23		CP23(0.5)		1450	S	G	✓
24		CP24(0.5)		1455	S	G	✓
25		CP25(0.5)		1500	S	G	✓

Additional Analyses / Remarks

2 day TAT
BOA: 4016
WD: 023

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 7-6-06 TIME: 1500

RECEIVED BY: [Signature] COMPANY: SR DATE: 7/6/06 TIME: 1620

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
- Plastic
 - VOA Vial
 - Sterile Plastic
 - Amber Glass
 - Widemouth Glass
 - Other

- Preservative Key**
- HCl, Cool to 4°
 - H2SO4, Cool to 4°
 - HNO3, Cool to 4°
 - NaOH, Cool to 4°
 - NaOH/Zn, Cool to 4°
 - Cool to 4°
 - None

COMMENTS

Date Received 7/6/06
 Courier: SR Hand Delivered

Bill of Lading

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 247532

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-25	% Solids	<i>JLT</i>	<i>Paul P. Kelly</i>	7-7-06	1500	
1-25	% Solids	<i>Paul P. Kelly</i>	<i>JLT</i>	7-7-06	1610	

Job Number.: 247532 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.: Job Check List Date.: 07/06/2006 Date of the Report.: 07/20/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.: rcw
 Customer.: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.4
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?.. N
- Sample Custodian Signature/Date..... Y

**SEVERN
TRENT
STL**

STL Chicago
2417 Bond Street **COC:071706A**
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. Rosypal/B. Brooks
Company: MWH
Address: Joblet Field Office
Phone: 815 423 6841
Fax:
E-Mail:

Bill To:

Contact: Same
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 2

Lab Lot# 247700

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature: °C of Cooler <u>5.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Res. Cl. Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
COC not present	

Sampler Name: Ryan Young Signature: [Signature]

Project Name: LAP Soil Project Number:

Project Location: Lab PM: Data Required Hard Copy: Fax:

Matrix	Comp/Grab	PAH
--------	-----------	-----

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	PAH
		JP-M3-ITF-AF1	7/17/06	11:08	S	G	X
		AF2	7/17/06	11:05	S	G	Y
		AF3	7/17/06	11:00	S	G	X
		AF4	7/17/06	11:15	S	G	X
		AF5	7/17/06	11:20	S	G	X
		AF6	7/17/06	11:25	S	G	Y
		AF7	7/17/06	11:30	S	G	X
		AF8	7/17/06	11:35	S	G	X
		AF9	7/17/06	11:40	S	G	X
		AF10	7/17/06	11:45	S	G	X
		JP-M3-ITF-AP1	7/17/06	10:30	S	G	Y
		JP-M3-ITF-AP2	7/17/06	10:35	S	G	Y

Additional Analyses / Remarks

2 day TAT
BOA 4016
WD 023

RELINQUISHED BY [Signature] COMPANY MWH DATE 7.17.06 TIME 1504

RECEIVED BY [Signature] COMPANY STL DATE 7/17/06 TIME 1504

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SD = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - W = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received

Courier: SC Hand Delivered

Bill of Lading

STL Chicago

Job Number.: 247700 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 07/17/2006 Date of the Report.: 07/31/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?.. Y
 Custody seal on shipping container?..... Y
 ...If "yes", custody seal intact?..... Y
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 5.0
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?..
 Sample Custodian Signature/Date..... Y

Job Number.: 247739 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 07/19/2006 Date of the Report...: 07/28/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: PCW
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by SYL?.. Y
 Custody seal on shipping container?..... Y
 ...If "yes", custody seal intact?..... Y
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?..
 Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago

2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Coc: 071906A

Report To:

Contact: S. Ryznar / B. Brooks
Company: MWH
Address: _____
Phone: _____
Fax: _____
E-Mail: _____

Bill To:

Contact: Same
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of

Lab Lot# 247748

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.3</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	Res Cl ₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present <input type="checkbox"/>	

Sampler Name:		Signature:		Refr #											
<u>Ryan Young</u>				# / Cont											
Project Name:		Project Number:		Volume											
<u>LAP Soil</u>				Preserv											
Project Location:		Date Required		Matrix											
		Hard Copy: ___/___/___		Comp/Grab											
Lab PM:		Fax: ___/___/___ <th colspan="2">Total Pb</th> <th colspan="10"></th>		Total Pb											
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	Total Pb	PAH	Arsenic	Zinc	Copper				
1		JPM3-ITF-AP 8 (1)	7/19/06	1325	S	G		✓	✓	✓	✓				
2		AP 9 (1)		1330	S	G	✓	✓							
3		AP 11 (1)		1340	S	G	✓	✓							
4		AF 11 (3)		1345	S	G		✓							
5		AF 12 (2)		1350	S	G		✓							
6		AF 13 (2)		1355	S	G		✓							
7		AF 14 (2)		1400	S	G		✓							
8		AF 15 (2)		1405	S	G		✓							
9		AF 16 (2)		1410	S	G		✓							
10		AF 17 (2)		1415	S	G		✓							
11		AF 19 (2)		1420	S	G		✓							

Additional Analyses / Remarks

2 day TAT
BOA: 4016
WD: 023

RELINQUISHED BY [Signature] COMPANY MWH DATE 7.19.06 TIME 1700

RECEIVED BY [Signature] COMPANY STL DATE 7/19/06 TIME 1700

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SC = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 7, 19, 06
Courier: STL Hand Delivered
Bill of Lading

SEVERN TRENSTL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Rosopal / B. Brooks
 Contact: MWH
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 E-Mail: _____

Bill To: _____
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only ← of

Lab Lot# 247748
 Package Sealed Yes No
 Samples Sealed Yes No

Received on Ice Yes No
 Samples Intact Yes No

Temperature °C of Cooler

Within Hold Time Yes No
 Preserv. Indicate Yes No NA

pH Check OK Yes No NA
 Res Cl₂ Check OK Yes No NA

Sample Labels and COC Agree Yes No
 CDC not present

Sampler Name: Ryan Young Signature: _____
 Project Name: LAD Soil Project Number: _____
 Project Location: _____ Date Required: _____
 Lab PM: _____ Hard Copy: _____
 Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Total Pb	PAH	Arsenic	Zinc	Copper	8330	Additional Analyses / Remarks
			Date	Time									
12		JPM3-ITF-AF20(2)	7/19/06	1430	S	G		✓	✓	✓	✓		2 day FAT BOA 4016 WD 023
13		AF20(2)D		1430	S	G		✓					
14		AF21(2)		1435	S	G		✓					
15		AF22(3)		1440	S	G		✓					
16		AF23(2)		1445	S	G		✓					
17		AF24(2)		1450	S	G		✓					
18		AF25(2)		1455	S	G		✓					
19		AF24(2)D		1450	S	G		✓					

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 7/19/06 TIME: 1704
 RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____
 RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O = _____

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: _____
 Courier: _____ Hand Delivered
 Bill of Lading

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 247748 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 07/20/2006 Date of the Report.: 07/28/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?	(Y/N)	Comments
-------------	-------	----------

Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.3
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

**SEVERN
TRENT** **STL**

STL Chicago **COL: 072106**
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. ROSYDAL / B. BROOKS
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: 815-423-6841
E-Mail: _____

Bill To: Same
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 247798

Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature °C of Cooler <u>5.2</u>	
Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
pH Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Res Cl. Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Sample Labels and COC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name:		Signature:		Refill #	Comp.	Volume	Preserv.	Matrix	Comp/Grab													
Project Name:		Project Number:																				
Project Location:		Date Required:																				
Lab PM:		Hard Copy: <u> </u>																				
Fax: <u> </u>																						
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab																
		JPM12-PROFILELAB001	7/21/06	11:05	W	C	8	Pb														

Additional Analyses / Remarks

2 TAT

WD: 023

BOA: 4016

RELINQUISHED BY [Signature] COMPANY [Signature] DATE 7/21/06 TIME 16:40

RECEIVED BY [Signature] COMPANY [Signature] DATE 7/21/06 TIME 16:40

Matrix Key

WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air

SE = Sediment
 SQ = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O =

Container Key

1. Plastic
 2. VOA Via
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key

1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS:

Date Received 7/21/06

Courier: [Signature] **Hand Delivered**

Bill of Lading

STL Chicago
Internal Sample Custody Transfer Record

Sample Lot#: 247798

Client: JOAAD

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	metals	sample obtained and returned		7/25/06		AMS

Job Number.: 247798 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 07/21/2006 Date of the Report.: 07/28/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	Y	
...If "yes", custody seal intact?.....	Y	
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2). Y	5.2	
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample Labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..		
Sample Custodian Signature/Date.....	Y	

SEVERN TREN T

STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Contact: S. ROYAL / B. DEBOV S.
 Company: MWU
 Address: JOLIE T FIELD OFFICE
 Phone: 815.423.4841
 Fax: _____
 E-Mail: _____

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 P.O. #: _____
 Quoter: _____

Signature: *[Signature]*
 Project Number: _____
 Date Required: _____
 Hard Copy: _____
 Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Date	Time	Matrix		Matrix	Comp/Grab	Notes	Volume	Preserve
					S	G					
1		JPM3ITF-AP12(C)	7/24/06	1138	S	G		PAH			
2		AP13(C)		1195	S	G					
3		AP14(C)		1148	S	G					
4		AP15(C)		1145	S	G					
5		JPM3ITF-AP28(C)		1150	S	G					
6		AF29(2)		1155	S	G					
7		AF30(2)		1200	S	G					
8		AF31(2)		1205	S	G					
9		AF32(2)		1210	S	G					
10		AF33(2)		1215	S	G					
11		AF34(2)		1220	S	G					

RELINQUISHED BY: *[Signature]* DATE: 7/24/06 TIME: 1:00 PM
 RECEIVED BY: *[Signature]* DATE: 7/25/06 TIME: 1:00 PM
 COMPANY: MWU COMPANY: 822

Matrix Key

Container Key

Preservative Key

- WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Sock
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Waste
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wafersmouth Glass
 6. Other
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

Shaded Areas For Internal Use Only 1 of 2

Lab Lot# 24811

Package Sealed: Yes () No () Samples Sealed: Yes () No ()

Returned on Ice: Yes () No () Samples Intact: Yes () No ()

Temperature: C of Cooler: 53

Within Hold Time: Yes () No () Presort Indicator: Yes () No ()

pH Check OK: Yes () No () Res Cl Check OK: Yes () No ()

Sample Labels and COD Agree: Yes () No () COD not present: Yes () No ()

Additional Analyses / Remarks

2 DAY TAT

BDA: 4816

W.D. 823

COMMENTS:

Date Received: / /

Counter: _____ Hand Delivered: _____

Bill of Lading: _____

rpjsckl	Job Sample Receipt Checklist Report	V2
Job Number.: 247811	Location.: 57222	Check List Number.: 1
Customer Job ID.....:	Job Check List Date.: 07/24/2006	Description.: Date of the Report.: 07/31/2006
Project Number.: 20005627	Project Description.: JOAAP: LAP	Project Manager.....: rcw
Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks	
Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	Y	
...If "yes", custody seal intact?.....	Y	
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	5.3
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..		
Sample Custodian Signature/Date.....	Y	

SEVERN
TRENT

STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

COE: 072566A

Report To:

Bill To:

Shaded Areas For Internal Use Only 1 of 2

Contact: S. Rosper / B. Bidows
Company: MWL
Address: 401117 FRIED BRIDE

Contact: _____
Company: _____
Address: _____

Phone: 815-423-6841

Phone: _____
Fac: _____
PO#: _____

Email: _____

Quote: _____

Sampler Name: RYAN VONK

Signature: *[Handwritten Signature]*

Project Name:

Project Number:

Project Location:

Date Required:

Hard Copy: _____
Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix		Matrix Comp/Grab	Total Pb	Other	Cont	Metal	Residual
					S	G						
1		JPM3ITE APR16 (2)	7/25	1205	S	G	X	X				
2		AP17 (2)		1210			X					
3		AP18 (2)		1215			X					
4		AP19 (2)		1220			X					
5		AP21 (2)		1230			X					
6		JPM3ITE AF36 (3)		1240			X					
7		AF37 (3)		1245			X					
8		AF38 (2)		1250			X					
9		AF39 (2)		1255			X					
10		AF40 (2)		1300			X					
11		AF41 (2)		1305			X					
12		AF42 (2)		1310			X					

REMOVED BY: *[Handwritten]*
REMOVED BY: *[Handwritten]*
DATE: 7/25/06
TIME: 1800

RECEIVED BY: *[Handwritten]*
RECEIVED BY: *[Handwritten]*
DATE: 7/26/06
TIME: 0940

DATE: 7/26/06
TIME: 0940

Matrix Key

Container Key

Preservative Key

- WW = Wastewater
- W = Water
- S = Soil
- SL = Sludge
- MIS = Miscellaneous
- OL = Oil
- A = Air

- SE = Sediment
- SO = Solid
- DS = Drums Solid
- DL = Drum Liquid
- L = Leachate
- WI = Wipe
- O =

- Pestic
- VOL Vial
- Stearic Plastic
- Amber Glass
- Wadsworth Glass
- Other

- HCl, Cool to 4°
- H2SO4, Cool to 4°
- HNO3, Cool to 4°
- NaOH, Cool to 4°
- NaOH/Zn, Cool to 4°
- Cool to 4°
- None

Lab Lot# 247836

Package Sealed: YES (NO)

Recapped on Ice: YES (NO)

Temperature C of Cooler: 4.0

Widely Hold Time: YES (NO)

PN Check: YES (NO) (NA)

Sample Labels and GOC Agree: YES (NO)

GOC 100% Present: YES (NO)

Passes Analytical: YES (NO) (NA)

Res. G. Check: YES (NO) (NA)

Additional Analyses / Remarks

2 DAY TAT

Boat Fork

WO: 023

Date Received: 7/26/06

Courier: SN

Hand Delivered:

Job Number.: 247836	Location.: 57222	Check List Number.: 1	Description.:	
Customer Job ID.....:		Job Check List Date.: 07/26/2006		Date of the Report...: 08/02/2006
Project Number.: 20005627	Project Description.: JOAAP: LAP			Project Manager.....: rcw
Customer.....: MWH Americas, Inc.		Contact.: Brigid Brooks		

Questions ?			(Y/N) Comments
Chain-of-Custody Present?.....	Y		
Were samples dropped off at or picked up by STL?..	Y		
Custody seal on shipping container?.....	N		
...If "yes", custody seal intact?.....			
Custody seals on sample containers?.....	N		
...If "yes", custody seal intact?.....			
Samples iced?.....	Y		
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.0	
Samples received intact (good condition)?.....	Y		
Volatile samples acceptable? (no headspace).....			
Correct containers used?.....	Y		
Adequate sample volume provided?.....	Y		
Samples preserved correctly?.....	Y		
Samples received within holding-time?.....	Y		
Agreement between COC and sample labels?.....	Y		
Radioactivity at or below background levels?.....	Y		
A Sample Discrepancy Report (SDR) was needed?.....	N		
Residual Chlorine Check Required?			
If samples were shipped was there an air bill #?..	N		
Sample Custodian Signature/Date.....	Y		

SEVERN
TRENT
STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact: S. DODDPAK / B. BROWN
Company: MWH
Address: DDIET FIELD OFFICE

STL Chicago
Contact: _____
Company: _____
Address: _____

Phone: 815-423-6841
Fax: _____
E-Mail: _____

Phone: _____
Fax: _____
Quote: _____

Sampler Name: RYAN YOUNT
Project Name: _____
Project Number: _____
Signature: *[Signature]*

Project Location: _____
Date Required: _____
Hard Copy: _____
Lab P/N: _____
Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Matrix	Comp/Grab	Matrix												
						Retire #	#/Comp	Volume	Prep	1	2	3	4					
13		JPM3 ITC AF526	7/27	S	Pb													
14		AF536	1110	G	8330													
15		AF546	1115		Zn													
16		AF550	1120		3													

RELINQUISHED BY: *[Signature]*
RELINQUISHED BY COMPANY: MWH
DATE: 7/27/06 TIME: 3:30

RECEIVED BY: *[Signature]*
RECEIVED BY COMPANY: SR
DATE: 7/27/06 TIME: 1530

DATE RECEIVED: 7/27/06 TIME: 1530
DATE DELIVERED: 7/27/06 TIME: 1600
COURTESY: SR HAND DELIVERED:
BILL OF LADING: _____

- Matrix Key**
- SE - Sediment
 - SO - Solid
 - DS - Drum Solid
 - DL - Drum Liquid
 - L - Leachate
 - WI - Wipe
 - 0 =

- Container Key**
1. Plastics
 2. YOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

Additional Analyses / Remarks
2 DAY TAT
BOA: 4816
WD: 023

Job Number.: 247884 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 07/27/2006 Date of the Report...: 08/02/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?.. Y
 Custody seal on shipping container?..... N
 ...If "yes", custody seal intact?.....
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.2
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?.. N
 Sample Custodian Signature/Date..... Y

SEVERN
TRENT
STL

STL Chicago

2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

COE: DT2B6LK

Report To:

Bill To:

Shaded Areas For Internal Use Only 1 of 2

Contact: S. Pospol / B. B. Bows
Company: WVH
Address: JOHN FIELD OFFICE

Contact: _____
Company: _____
Address: _____

Phone: 815-423-6811
Fax: _____
E-Mail: _____

Phone: _____
Fax: _____
PO#: _____
Quote: _____

Sampler Name: DYAN YOUNG
Project Name: _____
Project Location: _____
Lab PM: _____

Signature: [Signature]
Project Number: _____

Date Required: _____
Hard Copy: _____
Fax: _____

Laboratory ID	MS MSD	Client Sample ID	Date	Sampling Time	Matrix		Retention	# of Comp	Volume	Preserv	Temp	Respect on Ice	Temp. C of Cooler	Within Hold Time	Preserv. Indicated	pH Check OK	Res C1 Check OK	Sample Labels and COC Agree	COC not present	Additional Analyses / Remarks
					Comp/Grab	PAH														
1		JPU3JTE AF CLE (2)	7/28/06	9:00	S	G							40	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	2 DAY TAT
2		AF S7 (2)		9:05										(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	COA: 401b
3		AF S8 (2)		9:10										(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	WB: 023
4		AF S9 (2)		9:15										(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	
5		AF 60 (2)		9:20										(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	
6		AF 62 (2)		9:20										(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	
7		AF 63 (2)		9:25										(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	
8		AF 64 (2)		9:40										(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	
9		AF 65 (2)		9:45										(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	
10		AF 60 (2)		9:50										(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	
11		JPU3JTE AP 30 (1)		9:55										(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	
12		AP 31 (2)		10:00										(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	(Yes)	

RELINQUISHED BY: [Signature] COMPANY: STL DATE: 7/28/06 TIME: 2:36

RECEIVED BY: [Signature] COMPANY: STL DATE: 7/28/06 TIME: 1:53

DATE RECEIVED: 7/28/06 TIME: 1:53
COURT: STL HAND DELIVERED: [Signature]
BILL OF LADING: _____

- Matrix Key**
- SE = Sediment
 - SO = Soil
 - DS = Drums Solid
 - DL = Drums Liquid
 - L = Leachate
 - WI = Wipe
 - O = Other
- Container Key**
- 1. Plastic
 - 2. VOA Vial
 - 3. Sterile Plastic
 - 4. Amber Glass
 - 5. Wipemouth Glass
 - 6. Other
 - 7. None
- Preservative Key**
- 1. HCl, Cool to 4°
 - 2. H2SO4, Cool to 4°
 - 3. HNO3, Cool to 4°
 - 4. NaOH, Cool to 4°
 - 5. NaOH/2n, Cool to 4°
 - 6. Cool to 4°
 - 7. None

rpjsckl	Job Sample Receipt Checklist Report	V2
Job Number.: 247904	Location.: 57222	Check List Number.: 1
Customer Job ID.....	Job Check List Date.: 07/28/2006	Description.:
Project Number.: 20005627	Project Description.: JOAAP: LAP	Date of the Report...: 07/31/2006
Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks	Project Manager.....: rcw
Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.0
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between CDC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

SEVERN
TRENT
STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact: **S. POSYPAC/R. BESSON**
Company: **MWH**
Address: **JOHN FIELD OFFICE**

Phone: **BIS. 423. 6841**
Fax:
E-mail:

Bill To: **Severn**
Contact:
Company:
Address:
Phone:
Fax:
PO#:
Quote:

Sampler Name: **Ryan Younis**
Project Name: **M3**
Project Location:
Signature: *[Signature]*
Project Number:

Lab Pkt:
Date Required
Hard Copy:
Fax:

Laboratory ID	Client Sample ID	Sampling Date Time	Matrix		Ref #	% Cont	Volume	Preserv
			Comp	Grab				
050 M6 960								
1	JPUSITE AF67 (2)	8/1/06 1020	S	G				PA4
2	AF68 (2)	1025						
3	AF69 (2)	1040						
4	AF70 (2)	1045						
5	JPUSITE AF32 (2)	1050						
6	AP33 (1)	1056						
7	AT34 (1)	1060						
8	AT35 (1)	1105						
9	JPUSITE AP34 (1)-D	1100						

REINQUISHED BY: *[Signature]*
REINQUISHED BY COMPANY: **MWH**
DATE: **8/1/06**
TIME: **1500**

RECEIVED BY: *[Signature]*
RECEIVED BY COMPANY: **sn**
DATE: **8/1/06**
TIME: **1500**

- Matrix Key**
- SE - Sediment
 - SO - Solid
 - DS - Drum Solid
 - DL - Drum Liquid
 - L - Leachate
 - WI - Wipe
 - 0 -
- Container Key**
- 1. Paste
 - 2. VOA Vial
 - 3. Sterile Plastic
 - 4. Amber Glass
 - 5. Widemouth Glass
 - 6. Other
- Preservative Key**
- 1. HCl, Cool to 4°
 - 2. H2SO4, Cool to 4°
 - 3. HNO3, Cool to 4°
 - 4. NaOH, Cool to 4°
 - 5. NaOH/Zn, Cool to 4°
 - 6. Cool to 4°
 - 7. None

COMMENTS

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# **247954**

Package Sealed: Yes No

Repacked on ice: Yes No

Temperature C of Cooler: **4.5**

Within hold time: Yes No

pH Check OK: Yes No

Sample Labels and GOC Agree: Yes No

Preserv. Indicated: Yes No

Res Cl2 Check OK: Yes No

GOC not present: Yes No

Additional Analyses / Remarks: **2 DAY TAG**
204: 4016
W0: 023

Date Received: **8/1/06** Hand Delivered:

Bill of Lading

rpjsckl	Job Sample Receipt Checklist Report	V2
Job Number.: 247954	Location.: 57222	Check List Number.: 1
Customer Job ID.....		Description.:
Project Number.: 20005627	Project Description.: JOAAP: LAP	Job Check List Date.: 08/01/2006
Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks	Date of the Report...: 08/02/2006
		Project Manager.....: rcw
Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.5
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between CDC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. ROSEDALE / B. BOOKS
 Company: MWH
 Address: JOLIET FIELD OFFICE
 Phone: 815-422-6841
 Fax: _____
 E-Mail: _____

Bill To: _____
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 2

Lab Lot# 248048
 Package Sealed Yes No
 Samples Sealed Yes No
 Received on Ice Yes No
 Samples Intact Yes No
 Temperature °C of Cooler 4.5

Sampler Name:		Signature:		Refrg #																
<u>RYAN YOUNG</u>				# / Cont.																
Project Name:		Project Number:		Volume																
				Preserv																
Project Location:		Date Required		Matrix	Comp/Grab	PAH	PB													
Lab PM:		Hard Copy:																		
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time																
1		JPM3-ITF-AP36 (1)	8/4	1100	S	G	X													
2		AP37 (1)		1105			X													
3		AP38 (1)		1110			X													
4		JPM3-ITF-AF71 (2)		1115			Y													
5		AF72 (2)		1120			X													
6		AF73 (2)		1125			Y													
7		AF74 (2)		1130			X													
8		AF75 (2)		1135			X	X												
9		AF76 (2)		1140			X													
10		AF77 (2)		1145			Y													
11		AF78 (2)		1150			Y													
12		AF79 (2)		1155			Y													

Within Hold Time Yes No
 Preserv. Indicators Yes No NA
 pH Check OK Yes No NA
 Res Cl₂ Check OK Yes No NA
 Sample Labels and COC Agree Yes No
 COC not present

Additional Analyses / Remarks
2 DAY TAR
BDA: 4016
WO: 023

RELINQUISHED BY COMPANY _____ DATE 8-4-06 TIME 15:40

RECEIVED BY COMPANY STL DATE 8/4/06 TIME 15:40
 RECEIVED BY COMPANY STL DATE 8/4/06 TIME 16:20

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8/4/06
 Courier: SN Hand Delivered STL Chicago
 Bill of Lading

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. DOSYPAL / B. BROOKS
 Company: MWH
 Address: JOLIET FIELD OFFICE
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To:

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 2 of 2

Lab Lot# 248048

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. Indicated Yes No NA
pH Check OK Yes No NA	Res Cl ₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No COC not present	
Additional Analyses / Remarks	

Sampler Name:		Signature:		Refrg. #																			
<u>RYAN YOUNG</u>																							
Project Name:		Project Number:		Volume																			
Project Location:		Date Required		Matrix	Comp/Grab																		
Lab PM:		Hard Copy: _____ Fax: _____																					
Laboratory ID	MS-MSD	Client Sample ID		Date	Time	Matrix	Comp/Grab																
13		JPM3-1TF-AF80(G)		8/4	1200	S	G	X															
14		JPM3-1TF-AF72(G)-D		↓	1120	S	G	X															
15		JPM3-1TF-AF83(G)-D		↓	1110	S	G	X															
												PALL											

BOA: 4/16
 WD: 023
 2 DAY TAT

RELINQUISHED BY COMPANY _____ DATE 8.4.06 TIME 1540

RECEIVED BY COMPANY _____ DATE 8/9/06 TIME 15:40
 RECEIVED BY COMPANY _____ DATE 8/4/06 TIME 1620

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O = _____

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8, 4, 06
 Courier: SR2 Hand Delivered
 Bill of Lading

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248048 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 08/04/2006 Date of the Report...: 08/07/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.5

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... N

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... Y

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?... N

Sample Custodian Signature/Date..... Y

SEVERN TREN T STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Bill To:

Shaded Areas For Internal Use Only 1 of 1

Contact: S. ROSYPAL / B. B. PODKS
 Company: MWH
 Address: JOIET FIELD OFFICE
 Phone: 815 423 6841
 Fax: _____
 E-Mail: _____

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Lab Lot# 248049

Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature, C of Cooler <u>4.5</u>	
Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
pH Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Res Cl ₂ Check OK <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Sample Labels and COC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name:		Signature:		Ref: #															
Project Name:		Project Number:		Volume															
Project Location:		Date Required		Preserv															
Lab PM:		Hard Copy: _____		Matrix	Comp/Grab														
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time															
		<u>JPMB-TTF-VATSUD94</u>	<u>814</u>	<u>1300</u>	<u>SL</u>	<u>G</u>	<u>X</u>	<u>TL/SL</u>											

Additional Analyses / Remarks

2 DAY TAT

NO: 023

BOA: 4016

RELINQUISHED BY: [Signature] COMPANY: _____ DATE: 8-4-06 TIME: 1540

RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

RECEIVED BY: [Signature] COMPANY: _____ DATE: 8/4/06 TIME: 15:40

RECEIVED BY: [Signature] COMPANY: _____ DATE: 8/4/06 TIME: 1620

Matrix Key

WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air

SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WJ = Wipe
 O = _____

Container Key

1. Plastic
 2. WOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key

1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: _____

Courier: SR Hand Delivered:

Bill of Lading: _____

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466-6000
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. ROSYPAL / B. BROOKS
 Company: MWH
 Address: JOLIET FIELD OFFICE
 Phone: 815-423-4841
 Fax: _____
 E-Mail: _____

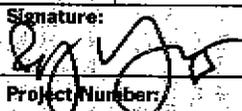
BNI To:

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 278065

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature: °C of Cooler <u>5.3</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Presery. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (NA)
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (NA)	Res Cl. Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (NA)
Sample Labels and CBC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CBC not present	

Sampler Name: RYAN YOUNG **Signature:** 

Project Name: _____ **Project Number:** _____

Project Location: _____ **Date Required:** _____

Lab PM: _____ **Hard Copy:** _____ **Fax:** _____

Matrix	Comp/Grab	Volume	Presery.	Temp	Time															

Laboratory ID	IMS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	DATA															
			Date	Time																		
1		JPM3 ITF AFB1(2)	8/7	1020	S	G	X															
2		AFB2(2)		1025			X															
3		AFB3(2)		1030			X															
4		AFB4(2)		1035			X															
5		JPM3 LTF AP44(1)		1045			X															
6		JPM3 LTF AFB3-D		1030			X															

Additional Analyses / Remarks

2 DAY TAT
 BDA: 4/11
 WD: 8/23

RELINQUISHED BY: S. Roy COMPANY: MWH DATE: 8/7/06 TIME: 1540

RECEIVED BY: [Signature] COMPANY: STL DATE: 8/7/06 TIME: 15:10

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drums Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O = _____

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: _____
 Courier: STL Hand Delivered
 Bill of Lading: _____

rpjsckl Job Sample Receipt Checklist Report

V2

Job Number.: 248065 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 08/07/2006
 Project Number.: 20005627 Project Description.: JDAAP: LAP Date of the Report...: 08/08/2006
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks Project Manager.....: rcw

Questions ? (Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 5.3
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?..
- Sample Custodian Signature/Date..... Y

SEVERN TRENT **STL**

STL Chicago
2417 Bond Street
University Park, IL 60456
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: **S. POSYPA / B. BROOKS**
Company: **MWH**
Address: **10157 FIELD OFFICE**
Phone: **815-423-6841**
Fax:
E-Mail:

Bill To:

Contact:
Company:
Address:
Phone:
Fax:
RO#:

Shaded Areas For Internal Use Only 1 of 2

Lab Lot# **248084**

Package Sealed: Yes (No) (No)

Samples Sealed: Yes (No) (No)

Received on Ice: Yes (No) (No)

Samples Intact: Yes (No) (No)

Temperature, C of Cooler: **4**

Within Hold Time: Yes (No) (No)

Presery Indicated: Yes (No) (No)

pH Check OK: Yes (No) (No)

Res. Cl. Check OK: Yes (No) (No)

Sample Labels and GOC Agency: Yes (No) (No)

GOC not present

Sampler Name:		Signature:		Matrix		Comp/Grab		PAH		Pb		Cu		Zn		TPH (GR)		
Project Name:		Project Number:		Date		Time												
Project Location:		Date Required:		Hard Copy:		Fax:												
Laboratory ID	MS-MSD	Client Sample ID	Date	Time	Matrix	Comp/Grab	PAH	Pb	Cu	Zn	TPH (GR)	Additional Analyses / Remarks						
		JPM3 ITF AF 85(2)	930	8/8	S	G	X											
		AF 86(2)	935				X		X		X							2 DAY TAT
		AF 87(4)	940				X		X		X							
		AF 88(2)	945				X											BOA: 4816
		AF 89(2)	950				X	X										WD: 822
		AF 90(2)	955				X											
		AF 91(2)	1000				X											
		AF 92(2)	1005				X											
		AF 93(2)	1010				X											
		AF 94(2)	1015				X											
		JPM3 ITF AP 46(1)	1020				X			X								
		AP 47(1)	1025				X	X										

RELINQUISHED BY: *[Signature]* COMPANY: **MWH** DATE: **8/8/06** TIME: **1400**

RELINQUISHED BY: COMPANY: DATE: TIME:

RECEIVED BY: *[Signature]* COMPANY: DATE: **8/8/06** TIME: **1600**

RECEIVED BY: COMPANY: DATE: TIME:

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Liquid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Amber Glass
 4. Widemouth Glass
 5. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS:

Date Received: **8, 8, 06**

Courier: **STL** Hand Delivered:

Bill of Lading:

STL Chicago

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248084 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/08/2006 Date of the Report...: 08/09/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?	(Y/N)	Comments
-------------	-------	----------

Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.2
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248135 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/11/2006 Date of the Report...: 08/22/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcv
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

Chain-of-custody Present?..... Y RELOG

Were samples dropped off at or picked up by STL?..

Custody seal on shipping container?.....

...If "yes", custody seal intact?.....

Custody seals on sample containers?.....

...If "yes", custody seal intact?.....

Samples iced?.....

Temperature of cooler acceptable? (4 deg C +/- 2).

Samples received intact (good condition)?.....

Volatile samples acceptable? (no headspace).....

Correct containers used?.....

Adequate sample volume provided?.....

Samples preserved correctly?.....

Samples received within holding-time?.....

Agreement between COC and sample labels?.....

Radioactivity at or below background levels?.....

A Sample Discrepancy Report (SDR) was needed?.....

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?..

Sample Custodian signature/Date.....

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211
Loc: 081106A

Report To:

Contact: S. ROYAL / B. BROOKS
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: 815-423-6841
Fax:
E-Mail:

Bill To:

Contact:
Company:
Address:
Phone:
Fax:
PO#:
Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 248160

Package Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature: C of Cooler <u>4.2</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res G. Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	COC not present

Sampler Name: RYAN YOUNG Signature: [Signature]
Project Name: Project Number:
Project Location: Date Required
Lab PM: Hard Copy: Fax:

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PAH	LEAD	TCUP	Additional Analyses / Remarks
			Date	Time						
1		JPM3-17F-AF96(G)	8/11	1015	S	G	X			
2		AF96(G)		1020			X			2 DAY TAT
3		AF97(G)		1025			X	X		
4		AF98(G)		1030			X			BDA: 4/16
5		AF99(G)		1035			X			
6		AF101(G)		1045			X			WO: 023
7		AF102(G)		1050			X			
8		JPM3-17F-AF99-D		1035			X			

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/11 TIME: 1512

RECEIVED BY: [Signature] COMPANY: [Signature] DATE: 8/11/06 TIME: 15:30

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS:

Date Received: 8/11/06
Courier: SR Hand Delivered:
Bill of Lading:

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248160 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 06/11/2006 Date of the Report.: 08/23/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MJH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.2
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample Labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?... N
- Sample Custodian Signature/Date..... Y

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. ROYAL / B. BOOKS
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: 815-423-6814
Fax:
E-Mail:

Bill To:

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 249192

Package Sealed No
Samples Sealed Yes No

Received on Ice Yes No
Samples Intact Yes No

Temperature °C of Cooler 6.3

Within Hold Time Yes No
Preserv. Indicated Yes No NA

pH Check OK Yes No NA
Res Cl. Check OK Yes No NA

Sample Labels and COC Agree Yes No
COC not present

Additional Analyses / Remarks

Sampler Name:		Signature:		Refry #															
Project Name:		Project Number:		Volume															
Project Location:		Date Required:		Preserv.															
Lab PM:		Hard Copy:		Matrix	Comp/Grab														
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time															
1		JPM3-ITF-AF103(L)	8/14	1200	S	G	X	X											
2		AF104(L)		1305			X	X											
3		AF105(L)		1310			X												
4		AF106(L)		1315			X												
5		AF107(L)		1320			X												
6		JPM3-ITF-AF105-D		1310															

2 DAY TAT
WD: 023
BDA: 4016

RELINQUISHED BY S. Royal COMPANY MWH DATE 8/14/06 TIME 1600

RECEIVED BY [Signature] COMPANY SFC DATE 8/14/06 TIME 15:40

RECEIVED BY [Signature] COMPANY SA DATE 8/14/06 TIME 1035

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air

SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O =

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4; Cool to 4°
3. HNO3; Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received
Courier: SFC Hand Delivered
Bill of Lading

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248182 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 08/14/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MNR Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 08/16/2006
 Project Manager.....: rcw

Questions ?	(Y/N) Comments
-------------	----------------

Chain-of-Custody Present?.....	Y
Were samples dropped off at or picked up by STL?... Y	
Custody seal on shipping container?..... Y	
...If "yes", custody seal intact?..... Y	
Custody seals on sample containers?..... N	
...If "yes", custody seal intact?.....	
Samples iced?..... Y	
Temperature of cooler acceptable? (4 deg C +/- 2). Y 5.3	
Samples received intact (good condition)?..... Y	
Volatile samples acceptable? (no headspace).....	
Correct containers used?..... Y	
Adequate sample volume provided?..... Y	
Samples preserved correctly?..... Y	
Samples received within holding-time?..... Y	
Agreement between COC and sample labels?..... N SEE SDR	
Radioactivity at or below background levels?..... Y	
A Sample Discrepancy Report (SDR) was needed?..... N	
Residual Chlorine Check Required?	
If samples were shipped was there an air bill #?..	
Sample Custodian Signature/Date..... Y	

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

COC: 6B15d6

Report To:

Contact: S. ROSYPAL / B. BROOKS
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: 815-423-6841
Fax:
E-Mail:

Bill To:

Contact:
Company:
Address:
Phone:
Fax:
PO#:
Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 249190

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl. Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name: <u>RYAN YOUNG</u>		Signature: <u>[Signature]</u>		Refr #		# / Cont														
Project Name: <u>LAP SOILS</u>		Project Number:		Volume		Preserv														
Project Location:		Date Required:		Matrix	Comp/Grab	PAT	Pb	TC	LP											
Lab PM:		Hard Copy:								Fax:										
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time																
1		JPM3-ITF-AF118 (2)	8/15	925	S	G	X													
2		AF111 (2)	8/15	930	S	G	X													
3		AF112 (2)	8/15	935	S	G	X													
4		AF113 (2)	8/15	940	S	G	X													
5		AF114 (2)	8/15	945	S	G	X													
6		AF115 (2)	8/15	950	S	G	X													
7		AF113-D	8/15	940	S	G	Y													

Additional Analyses / Remarks

2 DAY TAT
WO: 623
BOD: 4816

RELINQUISHED BY [Signature] COMPANY MWH DATE 8/15/06 TIME 15:00

RECEIVED BY [Signature] COMPANY STL DATE 8/15/06 TIME 15:35

Matrix Key
WW = Wastewater
W = Water
S = Sol
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air

SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O =

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received
Courier: STL Hand Delivered
Bill of Lading

STL Chicago

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248190 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/16/2006 Date of the Report...: 08/30/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?... Y
 Custody seal on shipping container?..... Y
 ...If "yes", custody seal intact?..... Y
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?..
 Sample Custodian Signature/date..... Y

SEVERN TRENT STL

STL Chicago
 2417 Bond Street COC: 681606
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. ROSYPAL / D. BROOKS
 Contact: _____
 Company: MWH
 Address: JOLIET FIELD OFFICE
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To: _____
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 248209

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Res Cl. Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
COC not present	

Sampler Name: RYAN YOUNG Signature: [Signature]

Project Name: LAP SOILS Project Number: _____

Project Location: _____ Date Required: _____

Lab PM: _____ Hard Copy: _____ Fax: _____

Refrig #	F / Cool	Volume	Process	Matrix	Comp/Grab	DAH	RTCLP

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	DAH	RTCLP
			Date	Time				
1		JPH3-ITF-APSDG	8/16	1000	S	G	X	
2		AP51 (1)		1005			X	X
3		AP54 (1)		1020			X	X
4		AP55 (1)		1025			X	
5		AP56 (1)		1030			X	X
6		AP55 (1)-D		1025			X	

Additional Analyses / Remarks

2 DAY TAT

WD: 023

BDA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/16/06 TIME: 1500

RECEIVED BY: [Signature] COMPANY: 832 DATE: 8/16/06 TIME: 1540

Matrix Key

WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air

SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O =

Container Key

1. Plastic
2. VOA Via
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key

1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received: _____

Courier: JFC Hand Delivered: [Signature]

Bill of Lading: _____

RPJACKL

Job Sample Receipt Checklist Report

V2

Job Number.: 248208 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 08/16/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 08/17/2006
 Project Manager.....: rcw

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?.. Y		
Custody seal on shipping container?.....	Y	
...If "yes", custody seal intact?.....	Y	
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0		
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..		
Sample Custodian Signature/Date.....	Y	

SEVERN TRENT STL

STL Chicago
 2417 Bond Street COC: 0817AG
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. PASY PAI | B. BROOKS
 Company: MWH
 Address: JULIET FIELD OFFICE
 Phone: 815-423-6841
 Fax:
 E-Mail:

Bill To:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 248233

Package Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature °C of Cooler <u>44</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl. Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> COC not present	

Sampler Name: <u>RYAN YOUNG</u>		Signature: <i>[Signature]</i>		Ref. #														
Project Name: <u>LAP SOILS</u>		Project Number:		# / Cont.	Volume	Preserv.												
Project Location:		Date Required		Matrix	Comp/Grab													
Lab PM:		Hard Copy:																
Laboratory ID	MS-MSD	Client Sample ID	Date	Time	Matrix	Comp/Grab												
		JPM3-ITF-AF116G	8/17	1100	S	G	X	X										
2		AF117(2)		1105			X											
3		AF118(2)		1110			X	X										
4		AF119(2)		1115			X	X										
5		AF121(2)		1125			X											
6		AF122(2)		1130			X											
7		AF123(2)		1135			X											
8		AF124(2)		1140			X											
9		JPM3-ITF-AP57(1)		1145			X	X										
10		JPM3-ITF-AF119G-D		1115			X	X										

Additional Analyses / Remarks

2 DAY TAT

WO: 023

BO4: 4816

RELINQUISHED BY *[Signature]* COMPANY MWH DATE 8/17/06 TIME 1644

RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____

RECEIVED BY *[Signature]* COMPANY SR DATE 8/17/06 TIME 1600

RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key.**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8/17/06

Courier: SR Hand Delivered

Bill of Lading

rpj/sckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248233 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/17/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Date of the Report.: 08/18/2006
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks Project Manager.....: rcw

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.4

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?... N

Sample Custodian Signature/Date..... Y

rpjsckl

Job Sample Receipt Checklist Report

VZ

Job Number.: 248248 Location.: 57222 Check List Number.: 1 Description.:

Customer Job ID..... Job Check List Date.: 08/18/2006 Date of the Report...: 08/29/2006

Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw

Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.4

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?... N

Sample Custodian Signature/Date..... Y

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248271 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 08/21/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Date of the Report...: 08/30/2006
 Customer.....: M/H Americas, Inc. Contact.: Brigid Brooks Project Manager.....: hcw

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?.. Y

Custody seal on shipping container?..... Y

...If "yes", custody seal intact?..... Y

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.6

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?...

Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: S. ROSYPAI / B. BLOOM
 Company: MWH
 Address: JOLIET FIELD OFFICE
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Lab Lot# 248289

Package Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature °C of Cooler <u>43</u>	
Within Hold Time Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl. Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and CDC Agree Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> CDC not present	

Sampler Name: <u>RYAN YOUNG</u>		Signature: <u>[Signature]</u>		Ref. #															
Project Name: <u>LAP SOILS</u>		Project Number:		# / Comp.															
Project Location:		Date Required		Volume															
Lab P#:		Hard Copy: <u> </u> <u> </u> <u> </u>		Preserv.															
Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PAH												
			Date	Time															
1		JPM3-1TF-AP64(1)	8/22	1000	S	G	X												
2		↓ AP65(1)		1005			X												
3		↓ AP66(1)		1010			X												
4		JPM3-1TF-AF134(2)		1015			X												
5		↓ AF135(2)		1020			X												
6		↓ AF136(2)		1025			X												

Additional Analyses / Remarks

2 DAY TAT
NO: 823
BDA: 4816

RELINQUISHED BY [Signature] COMPANY MWH DATE 8/22/06 TIME 1600

RECEIVED BY [Signature] COMPANY STL DATE 8/22/06 TIME 1600

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = O₂
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS:

Date Received 8/22/06
 Courier: STL Hand Delivered
 Bill of Lading

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 248289

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-6	8270	Samples obtained + returned			N/O sig	8/30/06 AMS

npjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248289 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 08/22/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MMH Americas, Inc. Contact.: Brigid Brooks

Date of the Report.: 08/23/2006
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?... N
- Sample Custodian Signature/Date?..... N

SEVERN TRENT **STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: S. Rosypa / B. Brooks
Company: MWH
Address: JOUET FIELD OFFICE
Phone: 815-423-6041
Fax:
E-Mail:

Contact: [Faded]
Company: [Faded]
Address: [Faded]
Phone: [Faded]
Fax: [Faded]
PO#: [Faded]

Lab Lot# 248301
Package Sealed: Yes (No)
Samples Sealed: Yes (No)
Received on Ice: Yes (No)
Sample Intact: Yes (No)
Temperature: 0 of Cooler: 44
Within Hold Time: Yes (No)
Preserv. Indicator: Yes (No) NA
pH Check OK: Yes (No) NA
Res. Cl. Check OK: Yes (No) NA
Sample Labels and COC Agree: Yes (No)
COC not present

Sampler Name: Ryan Young
Project Name: LAP SOILS
Project Location:
Lab PM:

Signature: [Signature]
Project Number:
Date Required:
Hard Copy:
Fax:

Matrix	Comp/Grab	Volume	Retain	Can	Other
S	G				

Laboratory ID	MS/MSID	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	PAH	PC	TOC	TPP	Other
1		JPM3-ITF-AP67(C)	8/23	1000	S	G	X				
2		AP68(C)		1005			X	X			
3		AP69(C)		1010			X				
4		AP70(C)		1015			X	X			
5		JPM3-ITF-AF137(C)		1020			X				
6		AF138(2)		1025			X				
7		AF139(2)		1030			X				
8		AF140(2)		1035			X	X	X		
9		AF141(C)		1040			X				
10		AF142(C)		1045			X				
11		JPM3-ITF-AP70(C)		1015			X	X			

Additional Analyses / Remarks
2 DAY TAT
BOA: 4816
W.D. 023

RELINQUISHED BY: [Signature] COMPANY: MWH
DATE: 8/23/06 TIME: 1320

RECEIVED BY: [Signature] COMPANY: STL
DATE: 08/23/06 TIME: 1319

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
 7. None
- Preservative Key**
1. HCl, Cool to 4
 2. H2SO4, Cool to 4
 3. HNO3, Cool to 4
 4. NaOH, Cool to 4
 5. NaOH/Zn, Cool to 4
 6. Cool to 4
 7. None

COMMENTS:

Date Received: 8/23/06
Courier: STL
Bill of Lading: Hand Delivered

STL Chicago Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 298301

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-11	ay	<i>JLT</i>	<i>D. J. ...</i>	08/23/06	0510	
1-11	ay	<i>D. J. ...</i>	<i>JLT</i>	08/23/06	1140	
8	Metals	<i>JLT</i>	<i>R...</i>	8/23/06	1745	
8	Metals	<i>R...</i>	<i>JLT</i>	8/23/06	2010	
1-11	% Solids	<i>JLT</i>	<i>Paul T. ...</i>	8/24/06	0845	
1-11	L	<i>Paul T. ...</i>	<i>JLT</i>	8/24/06	0910	

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 248301

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
8 soil	Dig → IUP	[Signature]	T. [Signature]	9/23/06	2350	
8	IUP	T. [Signature]	[Signature]	9/23/06	14:30	

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248301 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/23/2006 Date of the Report...: 08/30/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Contact.: Brigid Brooks
 Customer.....: MWH Americas, Inc.

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.4

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?... N

Sample Custodian Signature/Date..... Y

**SEVERN
TREN T** **STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: **SAME**

Contact: **S. ROSYPAL / B. BEDOKS**
Company: **MWH**
Address: **JOLIET FIELD OFFICE**
Phone: **815-423-6041**
Fax:
E-Mail:

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

248307
Shaded Areas For Internal Use Only

Lab Lot# **2482715**

Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature °C of Cooler N/A	
Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
pH Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Res. Ct. Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Labels and CBC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No CBC not present	

Sampler Name: **EVAN YOUNG**
Project Name: **LAP SOILS**
Project Location:
Lab PR#:

Signature: *[Signature]*
Project Number:
Date Required:
Hard Copy:
Fax:

Matrix	Comp/Grab	PAH	PL	TELP

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	PAH	PL	TELP
1		JPM3-ITF-AF125(C)	8/21	1145	S	G	X	X	
2		AF126(C)		1150			X	X	
3		AF127(C)		1155			X	X	
4		AF128(2)		1200			X		
5		AF129(2)		1205			X		
6		AF130(2)		1210			X		
7		AF131(L)		1215			X		
8		AF132(2)		1220			X		
9		AF133(2)		1225			X		
10		JPM3-ITF-AF130(C)-0		1210			X		

Additional Analyses / Remarks

2 DAY TAT

WD: 8/23

BDA: 4/16

RELINQUISHED BY: *[Signature]* COMPANY: **MWH** DATE: **8/21/06** TIME: **1500**

RECEIVED BY: *[Signature]* COMPANY: **STL** DATE: **8/21/06** TIME: **1600**

- Matrix Key**
- WW - Wastewater
 - W - Water
 - S - Soil
 - SL - Sludge
 - NS - Miscellaneous
 - OL - Oil
 - A - Air
 - SE - Sediment
 - SO - Solid
 - DS - Drum Solid
 - DL - Drum Liquid
 - L - Leachate
 - WI - Wipe
 - O -

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wilmouth Glass
 6. Other

- Preservative Key**
1. HCl Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: **8/21/06**
Courier: **STL** Hand Delivered:
Bill of Lading

James, Jeff

248307

From: Wright, Richard
Sent: Thursday, August 24, 2006 8:37 AM
To: James, Jeff
Cc: Gromala, Jodi; Johnson, Debbie; Petruszak, JoAnn; Knieriemen, Dan; Thompson, Brenda
Subject: MWH JOAAP

Jeff - would you log these three samples (6,9,10) in under a new job - 2 day TAT - Group #21. Please reply with new job number. PS: Thanks for the coverage Tuesday, I was here until 9 last night, but didn't even get to this.

Labaholics: **DRO, GRO and Total Cu on a 2 BDay TAT - Due Monday am**

-----Original Message-----

From: James, Jeff
Sent: Tuesday, August 22, 2006 1:52 PM
To: Wright, Richard
Subject: FW: JOAAP 248271

the 3 samples are:

- 6 AF130
- 9 AF133
- 10 AF130-D

JJ

-----Original Message-----

From: James, Jeff
Sent: Tuesday, August 22, 2006 11:53 AM
To: Wright, Richard; Odeshoo, Lisa; Gromala, Jodi
Subject: JOAAP 248271

MWH is requesting additional analysis on 3 samples rec'd yesterday.

Jared will call in ID's to me. Analysis is Cu, TPH(DRO,GRO).

These aren't rush at all, just site requirements.

Dick-Jeff and I don't ever remember doing these parameters for LAP soils. I told Jared you'd look into this on Wed and get back to him.

Jodi/Lisa-fyi only. Dick will probably do a relog after analysis is reported on the 3.

JJ

8/24/2006

STL Chicago

8

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248307	Location.: 57222	Check List Number.: 1	Description.:	Date of the Report...: 08/28/2006
Customer Job ID.....:		Job Check List Date.: 08/24/2006		Project Manager.....: rcw
Project Number.: 20005627	Project Description.: JOAAP: LAP			
Customer.....: MWH Americas, Inc.		Contact.: Brigid Brooks		

Questions ?	(Y/N) Comments
Chain-of-Custody Present?.....	Y relog
Were samples dropped off at or picked up by STL?..	
Custody seal on shipping container?.....	
...If "yes", custody seal intact?.....	
Custody seals on sample containers?.....	
...If "yes", custody seal intact?.....	
Samples iced?.....	
Temperature of cooler acceptable? (4 deg C +/- 2).	
Samples received intact (good condition)?.....	
Volatile samples acceptable? (no headspace).....	
Correct containers used?.....	
Adequate sample volume provided?.....	
Samples preserved correctly?.....	
Samples received within holding-time?.....	
Agreement between CDC and sample labels?.....	
Radioactivity at or below background levels?.....	
A Sample Discrepancy Report (SDR) was needed?.....	
Residual Chlorine Check Required?	
If samples were shipped was there an air bill #?..	
Sample Custodian Signature/Date.....	

Job Number.: 248271 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 08/21/2006 Date of the Report...: 08/28/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.6
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?..
- Sample Custodian Signature/Date..... Y

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street
Univers ty Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. Rosypal/B. Brooks
Company: MWH
Address: Joliet Field Office
Phone: 815 423 6841
Fax:
E-Mail:

Bill To:

Contact: same
Company:
Address:
Phone:
Fax:
PO#: Quote:

24832
Shaded Areas For Internal Use Only 1 of 2

Lab Lot# 247900

Package Sealed (Yes/No)	Sample Sealed (Yes/No)
Retained on Ice (Yes/No)	Samples Intact (Yes/No)
Temperature °C of Cooler <u>5</u>	
Within Hold Time (Yes/No)	Preserv. Indicated (Yes/No/NA)
Oil Check OK (Yes/No/NA)	Res. Ch. Check OK (Yes/No/NA)
Sample Labels and CDC Agree (Yes/No) CDC not present	

Sampler Name: Ryan Young
Project Name: LAP Soil
Project Location:
Lab PM:

Signature: [Signature]
Project Number:
Date Required
Hard Copy:
Fax:

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PAH															
			Date	Time																		
1		JP-M3-ITF-AF1	7/17/06	11:00	S	G	X															
2		AF2	7/17/06	11:05	S	G	Y															
3		AF3	7/17/06	11:00	S	G	X															
4		AF4	7/17/06	11:15	S	G	X															
5		AF5	7/17/06	11:20	S	G	X															
6		AF6	7/17/06	11:25	S	G	Y															
7		AF7	7/17/06	11:30	S	G	X															
8		AF8	7/17/06	11:35	S	G	X															
9		AF9	7/17/06	11:40	S	G	X															
10		AF10	7/17/06	11:45	S	G	X															
11		JP-M3-ITF-API	7/17/06	10:30	S	G	Y															
12		JP-M3-ITF-API	7/17/06	10:35	S	G	Y															

Additional Analyses / Remarks

2 day TAT
BOA 4016
WD 023

RELINQUISHED BY [Signature] COMPANY MWH DATE 7.17.06 TIME 1504

RECEIVED BY [Signature] COMPANY STL DATE 7/17/06 TIME 1504

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 CS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WL = Wipe
 O =

Container Key.
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received
 Courier: SC Hand Delivered
 BHI of Lading

**SEVERN
TRENT
STL**

STL Chicago *LOC: 071706 B*
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: *S. Rosypal / B. Brooks*
 Company: *MLWH*
 Address: *JOLIET FIELD OFFICE*
 Phone: *815.423.0841*
 Fax:
 E-Mail:

Bill To:

Contact: *same*
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only *2 of 2*

Lab Lot# *247700*

Package Sealed Yes No	Samples Sealed Yes No
Repacked on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler <i>5</i>	
Within Hold Time Yes No	Preserv. Indicated Yes No <i>NA</i>
All Check OK Yes No <i>NA</i>	Res. CL Check OK Yes No <i>NA</i>
Sample Labels and DOC Agree Yes No	DOC not present

Sampler Name: *Ryan Young*
 Signature: *[Signature]*
 Project Name: *LAP Soil*
 Project Number:
 Project Location:
 Lab P/N:
 Date Required:
 Hard Copy: *___/___/___*
 Fax: *___/___/___*

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PAH												
			Date	Time															
<i>13</i>		<i>JP M3 I/F AP3</i>	<i>7/17</i>	<i>10:40</i>	<i>S</i>	<i>G</i>	<i>X</i>												
<i>14</i>		<i>AP4</i>	<i>7/17</i>	<i>10:45</i>	<i>S</i>	<i>G</i>	<i>X</i>												
<i>15</i>		<i>AP5</i>	<i>7/17</i>	<i>10:50</i>	<i>S</i>	<i>G</i>	<i>X</i>												

Additional Analyses / Remarks

*2 day TAT
BOA 4016
WO 023*

RELINQUISHED BY *[Signature]* COMPANY *MLWH* DATE *7/17/06* TIME *12:04* RECEIVED BY *[Signature]* COMPANY *STL* DATE *7/17/06* TIME *18:04*

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 CL = Oil
 A = Air
 SE = Sediment
 SC = Solid
 OS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WT = Waste
 D =

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received
 Courier: Hand Delivered
 BBI of Lading

**SEVERN
TRENT
STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. Rospal / B. Brooks
 Contact: S. Rospal / B. Brooks
 Company: MWH
 Address: _____
 Phone: _____
 Fax: _____
 E-Mail: _____

Bill To: _____
 Contact: Same
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

248312 / 1 of 2

Shaded Areas For Internal Use Only

Lab Lot# 247748

Package Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature °C of Cooler <u>4.3</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Presery. Indicate Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA <input checked="" type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA <input checked="" type="checkbox"/>	Res. Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA <input checked="" type="checkbox"/>
Sample Labels with CDC Agree Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> CDC not present <input checked="" type="checkbox"/>	

Sampler Name: Ryan Young
 Project Name: LAP Soil
 Project Location: _____
 Lab PM: _____

Signature: _____
 Project Number: _____
 Date Required: _____
 Hard Copy: _____
 Fax: _____

Matrix	Comp/Grab	Total/PB	PAH	Arsenic	Zinc	Copper	8330
S	G		✓	✓	✓	✓	
S	G	✓	✓				
S	G	✓	✓				
S	G		✓				
S	G		✓				
S	G		✓				
S	G		✓				
S	G		✓				
S	G		✓				
S	G		✓				
S	G		✓				
S	G		✓				

Additional Analyses / Remarks

2 day TAT

BOA: 24016

WD: 023

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 7.19.06 TIME: 1700

RECEIVED BY: [Signature] COMPANY: STL DATE: 7/19/06 TIME: 1700

- Matrix Key**
- WW - Wastewater
 - W - Water
 - S - Soil
 - SL - Sludge
 - MS - Miscellaneous
 - OL - Oil
 - A - Air
 - SE - Sediment
 - SC - Solid
 - DS - Drum Solid
 - DL - Drum Liquid
 - L - Leachate
 - WI - Wipe
 - O -

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wilmouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 7.19.06

Courier: STL Hand Delivered

Bill of Lading _____

SEVERN TRENT STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. Rompel / B. Brooks
Company: MWH
Address: _____
Phone: _____
Fax: _____
E-Mail: _____

Bill To:

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

248312 Shaded Areas For Internal Use Only 2 of 2

Lab Lot# <u>247748</u>	
Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserve Indicate Yes No NA
pH Check OK Yes No NA	Res Cl ₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No CQC not present	

Sampler Name: Ryan Young
Project Name: LAP Soil
Project Location: _____
Lab P#: _____

Signature: _____
Project Number: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Matrix	Comp/Grab	Total Pb	PAH	Arsenic	Zinc	Copper
						8330
S	G		✓	✓	✓	✓
S	G		✓			
S	G		✓			
S	G		✓			
S	G		✓			
S	G		✓			
S	G		✓			
S	G		✓			
S	G		✓			

Additional Analyses / Remarks
2 day TAT
BOA 4016
WD 023

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 7/19/06 TIME: 7:10A
RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

Matrix Key

WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air

Container Key

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key

1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received: _____

Courier: _____ Hand Delivered

Bill of Lading _____

**SEVERN
TRENT**

STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. Rasypal / B. Brooks
Company: MWH
Address: JOHNS FIELD OFFICE
Phone: 815-423-6841
Fax:
E-Mail:

Bill To:

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 2 of 2

Lab Lot# 247836

Package Sealed Yes No	Container Sealed Yes No
Rechecked for leaks Yes No	Sample Intact Yes No
Temperature °C of Cooler	
Wash Hold Time Yes No	Presort Indicated Yes No NA
pH Check OK Yes No NA	Gas Cl. Check OK Yes No NA
Sample Labels and CDC Agree Yes No CDC Not present	

Sampler Name: RYAN YOUNG
Signature: [Signature]
Project Name:
Project Number:
Project Location:
Date Required
Hard Copy:
Lab PIN:
Fax:

Matrix	Comp/Grab	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
			Date	Time																								
		<u>JP#3 IFAF43 (2)</u>	<u>7/25/06</u>	<u>1315</u>	<u>S</u>	<u>G</u>	<u>X</u>																					
		<u>↓ AFA44 (2)</u>	<u>7/25/06</u>	<u>1320</u>	<u>S</u>	<u>G</u>	<u>X</u>																					

Additional Analyses / Remarks

2 DAY TAT
BDA: 4/04
WO: 023

RELINQUISHED BY [Signature] COMPANY MWH DATE 7/25/06 TIME 1900

RECEIVED BY [Signature] COMPANY SR DATE 7/26/06 TIME 0940

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
DL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O =

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received 7/26/06
Courier: SR Hand Delivered
Bill of Lading

SEVERN TREN **STL**

STL Chicago
2417 Bond Street COC: 072866A
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. ROSYPAL / BB BOOKS
Company: UNIL
Address: JOLIET FIELD OFFICE
Phone: 815-423-6841
Fax:
E-Mail:

Bill To:

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 2

248312

Lab Lot# 247964

Package Sealed Yes No
Samples Sealed Yes No
Received on Ice Yes No
Samples Intact Yes No
Temperature °C of Cooler 4.0

Sampler Name:		Signature:		Refr #	# / Cont.	Volume	Preserv										
<u>EVAN YOUNG</u>																	
Project Name:		Project Number:		Matrix	Comp/Grab												
Project Location:		Date Required		Matrix	Comp/Grab												
Lab PM:		Hard Copy: <input type="checkbox"/>															
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	RAH										
<u>1</u>		<u>JPU3 IIF AF 56 (2)</u>	<u>7/28/06</u>	<u>900</u>	<u>S</u>	<u>6</u>	<u>X</u>										
<u>2</u>		<u>AF57 (2)</u>		<u>905</u>			<u>X</u>										
<u>3</u>		<u>AF58 (2)</u>		<u>910</u>			<u>X</u>										
<u>4</u>		<u>AF59 (2)</u>		<u>915</u>			<u>X</u>										
<u>5</u>		<u>AF60 (2)</u>		<u>920</u>			<u>X</u>										
<u>6</u>		<u>AF62 (2)</u>		<u>930</u>			<u>X</u>										
<u>7</u>		<u>AF63 (2)</u>		<u>935</u>			<u>X</u>										
<u>8</u>		<u>AF64 (2)</u>		<u>940</u>			<u>X</u>										
<u>9</u>		<u>AF65 (2)</u>		<u>945</u>			<u>X</u>										
<u>10</u>		<u>AF66 (2)</u>		<u>950</u>			<u>X</u>										
<u>11</u>		<u>JPU3 IIF AP 30 (1)</u>		<u>955</u>			<u>X</u>										
<u>12</u>		<u>AP 31 (2)</u>		<u>1000</u>			<u>X</u>										

Within Hold Time Yes No
Preserv. Indicated Yes No NA
pH Check OK Yes No NA
Res Cl₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No
COC not present

Additional Analyses / Remarks

2 DAY TAT
BDA: 4016
WB: 023

RELINQUISHED BY COMPANY DATE 7/28/06 TIME 3:35

RECEIVED BY COMPANY DATE 7/28/06 TIME 1600

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
CS = Drum Solid
EL = Drum Liquid
L = Leachate
WI = Wipe
D =

Container Key
1. Plastic
2. VCA Val
3. Sterile Plastic
4. Amber Glass
5. Wdemouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received 7/28/06
Courier: STL Hand Delivered
Bill of Lading

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. ROSY/PAL/B. BROOKS
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: 315-422-6841
Fax: _____
E-Mail: _____

Bill To:

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

248302 of 1
Shaded Areas For Internal Use Only

Lab Lot# 247954

Package Sealed Yes <input type="radio"/> No <input checked="" type="radio"/>	Samples Sealed Yes <input type="radio"/> No <input checked="" type="radio"/>
Received on Ice Yes <input type="radio"/> No <input checked="" type="radio"/>	Samples Intact Yes <input type="radio"/> No <input checked="" type="radio"/>
Temperature °C of Cooler <u>4.5</u>	
Within Hold Time Yes <input type="radio"/> No <input checked="" type="radio"/>	Preserv. Indicated Yes <input type="radio"/> No <input checked="" type="radio"/> NA
pH Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA	Res Cl ₂ Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA
Sample Labels and COC Agree Yes <input type="radio"/> No <input checked="" type="radio"/>	COC not present

Sampler Name: RYAN YOUNG Signature: [Signature] Refrg # _____
Project Name: M3 Project Number: _____ # / Cont: _____
Project Location: _____ Date Required _____ Volume _____
Lab PM: _____ Hard Copy: _____ Preserv: _____
Fax: _____ Matrix _____ Comp/Grab _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	PAL
1		JPH3IT AF67 (2)	8/1/06	1020	S	G	X
2		AF68 (2)		1025			X
3		AF69 (2)		1040			X
4		AF70 (2)		1045			X
5		JPH3IT AP32 (2)		1050			X
6		AP33 (2)		1052			X
7		AP34 (2)		1100			X
8		AP35 (2)		1105			X
9		JPH3IT AP34 (2)	8/1/06	1100			X

Additional Analyses / Remarks
2 DAY TAT
RDA: 4/16
WO: 023

RELINQUISHED BY [Signature] COMPANY MWH DATE 8/1/06 TIME 1504

RECEIVED BY [Signature] COMPANY sn DATE 8/1/06 TIME 1500

- Matrix Key**
 WW = Wastewater SE = Sediment
 W = Water SO = Solid
 S = Soil DS = Drum Solids
 SL = Sludge DL = Drum Liquid
 MS = Miscellaneous L = Leachate
 CL = Oil WI = Waste
 A = Air C =
- Container Key**
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8/1/06
 Courier: STL Hand Delivered
 Bill of Lading

248302

**SEVERN
TRENT
STL**

STL Chicago
2417 Bond Street
University Park, IL 60466-**CAC: 080706**
Phone: 708-534-5200
Fax: 708-534-5211

Report To:
Contact: S. ROSYPAL / B. BROOKS
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: 815-423-6841
Fax:
E-Mail:

Bill To:
Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 278068

Sealed	Samples Sealed
Intact	Samples Intact
Yes	Yes
No	No
Yes	Yes
No	No
Yes	Yes
No	No
Yes	Yes
No	No

Sampler Name: <u>RIAN YOUNG</u>		Signature:		Date Required		Matrix		Comp/Grab		DATE	
Project Name:		Project Number:		Date Required		Matrix		Comp/Grab		DATE	
Project Location:		Date Required		Date Required		Matrix		Comp/Grab		DATE	
Lab PM:		Date Required		Date Required		Matrix		Comp/Grab		DATE	
Date Required		Date Required		Date Required		Matrix		Comp/Grab		DATE	
Hard Copy:		Date Required		Date Required		Matrix		Comp/Grab		DATE	
Fax:		Date Required		Date Required		Matrix		Comp/Grab		DATE	
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	DATE				
3		JPM3LTF AFB1 (2)	8/7	1020	S	G	X				
1		AFB2 (2)		1025			X				
		AFB3 (2)		1030			X				
		AFB4 (2)		1035			X				
		JPM3LTF AD44 (1)		1045			X				
		JPM3LTF AFB3-D		1030			X				

Additional Analyses / Remarks

2 DAY TAT

BOD: 4014

NO: 023

RELINQUISHED BY S. Rosypal COMPANY MWH DATE 8/7/06 TIME 1540

RECEIVED BY [Signature] COMPANY STL DATE 8/7/06 TIME 15:10

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Dross Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Waste
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wide-mouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received

Courier: STL Hand Delivered

Bill of Lading

SEVERN TRENT STL

STL Chicago
 2417 Bond Street **COL DBD 8664**
 University Park, IL 60456
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Bill To:

Shaded Areas For Internal Use Only 1 of 2

Contact: **S. POSNAPAL / B. BROOKS**

Company: **MWH**

Address: **JOLIE FIELD OFFICE**

Phone: **815-423-6841**

Fax:

E-mail:

Contact:

Company:

Address:

Phone:

Fax:

PO#:

Quote:

Lab Lot# **248084**

Sampler Name: **RYAN YOUNG**
Signature: *[Signature]*
Project Name:
Project Number:
Project Location:
Date Required:
Lab PM:
Hard Copy:
Fax:

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PAH	PB	CY	Zn	TPH (GR)	Additional Analyses / Remarks
			Date	Time								
		JPM3 IFAF 850	930	8/8	S	G	X					
		AF 86 (2)	935				X		X	X		2 DAY TAT
		AF 87 (2)	940				X		X	X		
		AF 88 (2)	945				X					BOA: 4016
		AF 89 (2)	950				X	X				
		AF 90 (2)	955				X					NO: 823
		AF 91 (2)	1000				X					
		AF 92 (2)	1005				X					
		AF 93 (2)	1010				X					
		AF 94 (2)	1015				X					
		JPM3 IFAF 46 (1)	1020				X			X		
		AP 47 (1)	1025				X	X				

RELINQUISHED BY: *[Signature]* COMPANY: **MWH** DATE: **8/9/06** TIME: **1400**
 RECEIVED BY: *[Signature]* COMPANY: **STL** DATE: **8/9/06** TIME: **1600**
 RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____
 RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Waste
 - O = Other

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS:

Date Received: **8, 9, 06**
 Courier: **STL** Hand Delivered:
 BAJ of Lading

STL Chicago
Internal Sample Custody Transfer Record

Sample Lot#: 248312

Client: JOAPP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
	<i>metals</i>	<i>sample obtained + returned</i>		<i>W/O sig</i>	<i>8/29/06</i>	<i>AMO</i>

rpjsckl

Job Sample Receipt Checklist Report

VZ

Job Number.: 248312 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/24/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 08/29/2006
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y relogs

Were samples dropped off at or picked up by STL?..

Custody seal on shipping container?.....

...If "yes", custody seal intact?.....

Custody seals on sample containers?.....

...If "yes", custody seal intact?.....

Samples iced?.....

Temperature of cooler acceptable? (4 deg C +/- 2).

Samples received intact (good condition)?.....

Volatile samples acceptable? (no headspace).....

Correct containers used?.....

Adequate sample volume provided?.....

Samples preserved correctly?.....

Samples received within holding-time?.....

Agreement between COC and sample labels?.....

Radioactivity at or below background levels?.....

A Sample Discrepancy Report (SDR) was needed?.....

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?..

Sample Custodian Signature/Date.....

RPJskL

Job Sample Receipt Checklist Report

V2

Job Number.: 247836 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 07/26/2006 Date of the Report.: 08/29/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: PCW
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
-If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?.. N
- Sample Custodian Signature/Date..... Y

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 247904 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 07/28/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MMH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 08/29/2006
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?... N

Sample Custodian Signature/Date..... Y

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 247954 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/01/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 08/29/2006
 Project Manager.....: rcv

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?.. Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.5

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?.. N

Sample Custodian Signature/Date..... Y

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248065 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/07/2006 Date of the Report...: 08/29/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... Y

...If "yes", custody seal intact?..... Y

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 5.3

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?..

Sample Custodian Signature/Date..... Y

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248084 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/08/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 08/29/2006
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.2

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?... N

Sample Custodian Signature/Date..... Y

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 247700 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 07/17/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report.: 08/29/2006
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... Y

...If "yes", custody seal intact?..... Y

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 5.0

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?..

Sample Custodian Signature/Date..... Y

rpjsckl

Job Sample Receipt Checklist Report

v2

Job Number.: 247748 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 07/20/2006 Date of the Report...: 08/29/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?... N

Sample Custodian Signature/Date..... Y

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street
University Park, IL 60456
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. Rosypal / B. Brooks
Contact: MWH
Company: MWH
Address: _____
Phone: _____
Fax: _____
E-Mail: _____

Bill To: _____
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

248315
Shaded Areas For Internal Use Only 2 of 2

Lab Lot# <u>248315</u>	
Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. Indicate Yes No NA
pH Check OK Yes No NA	Res Cl ₂ Check OK Yes No NA
Sample Labels and CDC Agree Yes No CDC not present	

Sampler Name: Ryan Young Signature: _____
Project Name: LAP Soil Project Number: _____
Project Location: _____ Date Required: _____
Lab PW: _____ Hard Copy: _____
Fax: _____

Laboratory ID	MS-RSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Total Pb	PAH	Arsenic	Zinc	Copper	8330	Additional Analyses / Remarks
			Date	Time									
18		JPM3-ITF-AF20(2)	7/19/06	1430	S G			✓	✓	✓	✓		
3		AF20(2)D		1430	S G			✓					2 day TAT 30A 4016 WD 023
4		AF21(2)		1435	S G			✓					
15		AF22(3)		1440	S G			✓					
16		AF23(2)		1445	S G			✓					
17		AF24(2)		1450	S G			✓					
18		AF25(2)		1455	S G			✓					
19		AF24(2)D		1450	S G			✓					

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 7/19/06 TIME: 1704
RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____
RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

Matrix Key
WW = Wastewater SE = Sediment
W = Water SO = Solid
S = Sol DS = Drum Solid
SL = Sludge DL = Drum Liquid
MS = Miscellaneous L = Leachate
OL = O WI = Wipe
A = Air O = _____

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received: _____
Courier: _____ Hand Delivered
Bill of Lading

rpjsckl

Job Sample Receipt Checklist Report

VZ

Job Number.: 248315 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/24/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 08/30/2006
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y RELOG

Were samples dropped off at or picked up by STL?..

Custody seal on shipping container?.....

...If "yes", custody seal intact?.....

Custody seals on sample containers?.....

...If "yes", custody seal intact?.....

Samples iced?.....

Temperature of cooler acceptable? (4 deg C +/- 2).

Samples received intact (good condition)?.....

Volatile samples acceptable? (no headspace).....

Correct containers used?.....

Adequate sample volume provided?.....

Samples preserved correctly?.....

Samples received within holding-time?.....

Agreement between COC and sample labels?.....

Radioactivity at or below background levels?.....

A Sample Discrepancy Report (SDR) was needed?.....

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?..

Sample Custodian Signature/Date.....

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. ROSY/PAL/B. BROOKS BIE To: CAME

Shaded Area For Internal Use Only 1 of 1

Contact: S. ROSY/PAL/B. BROOKS
 Company: MWH
 Address: BLIET FIELD OFFICE
 Phone: 312-423-6841
 Fax: _____
 E-Mail: _____

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Lab Lot# 248327

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature: C of Cooler <u>5</u>	
Within Hold Time Yes No	Preserv. Indicator Yes No NA
pH Check OK Yes No NA	Res Cl. Check OK Yes No NA
Sample Labels and COC Agree Yes No	
COC not present	

Sampler Name: RYAN YOUNG
 Signature: [Signature]
 Project Name: LAP SOILS
 Project Number: _____
 Project Location: _____
 Lab PIN: _____

Date Required: _____
 Hard Copy: _____
 Fax: _____

Refrig #	Cont	Volume	Preserv	Matrix	Comp/Grab	PAH	Pb	TCLP

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	PAH	Pb	TCLP
1		JPM3-ITF-AF143(2)	8/24	1015	S	G	X	X	
2		AF 144 (2)		1020			X		
3		AF 145(2)		1025			X		
4		AF 146 (2)		1030			X		
5		AF 147 (2)		1035			X		
6		↓ AF 148 (2)		1040			X	X	
7		JPM3-ITF-AP 71 (1)		1045			X		
8		↓ AP 72 (1)		1050			X	X	
9		JPM3-ITF-AF 145(2) ↓		1025	↓	↓	X		

Additional Analyses / Remarks

2 DAY TAT
 WD: 8/23
 BDA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/24/05 TIME: 1400

RECEIVED BY: [Signature] COMPANY: STL DATE: 8/24/06 TIME: 1430

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 8, 24, 06
 Courier: STL Hand Delivered [Signature]
 Bill of Lading

rpjsckl

Job Sample Receipt Checklist Report

VZ

Job Number.: 248327 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/24/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MVH Americas, Inc. Contact.: Brigid Brooks

Date of the Report.: 08/30/2006
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 5.1
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?..
- Sample Custodian Signature/Date..... Y

SEVERN TREAT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. ROSY/PAL / B. BROOKS Bill To: SAME Shaded Areas For Internal Use Only 1 of 1

Contact: S. ROSY/PAL / B. BROOKS Contact: _____
 Company: MWH Company: _____
 Address: JOLIET FIELD OFFICE Address: _____
 Phone: BUS. 422.6641 Phone: _____
 Fax: _____ Fax: _____
 E-Mail: _____ PO#: _____ Quote: _____

Lab Lot# 248379

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>17.2</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	Ros Cl. Check OK Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name: RYAN YOUNG Signature: [Signature]

Project Name: LAP SOILS Project Number: _____

Project Location: _____ Date Required: _____
 Lab PM: _____ Hard Copy: _____
 Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PAL	Totals Pb	TPH	CH	Additional Analyses / Remarks
			Date	Time							
1		JPM3-ITF-AF149 (2)	8/28	1200	S	G	X	X			2 DAY TAG
2		AF150 (2)		1205			X	X			
3		AF151 (2)		1210			X	X			WB: 023
4		AF152 (2)		1215			X	X			
5		AF153 (2)		1220			X	X	X	X	BDA: 4016
6		AF154 (2)		1225			X	X	X	X	
7		AF155 (2)		1230			X	X			
8		JPM3-ITF-AP73 (1)		1235			X	X			
9		AP74 (1)		1240			X	X			
10		JPM3-ITF-AF153 (1)-D		1220			X	X	X	X	

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 8/28/06 TIME: 16:00

RECEIVED BY: [Signature] COMPANY: STL DATE: 8/28/06 TIME: 16:15

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widenmouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: _____

Courier: SR Hand Delivered

BRI of Lading: _____

STL Chicago

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248379 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/28/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report.: 08/31/2006
 Project Manager.....: rcw

Questions ?	(Y/N)	Comments
-------------	-------	----------

Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	Y	
...If "yes", custody seal intact?.....	Y	
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.2
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..		
Sample Custodian Signature/Date.....	Y	

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street COC: 083106
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: S. POSYPAL / B. BROOKS
Company: HWH
Address: JOLIET FIELD OFFICE
Phone: 815-423-6841
Fax:
E-Mail:

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Lab Lot# 248439
Package Sealed Yes No
Samples Sealed Yes No
Received on Ice Yes No
Samples Intact Yes No
Temperature °C of Cooler 4.1
Within Hold Time Yes No
Preserv. Indicated Yes No NA
pH Check OK Yes No NA
Res Cl, Check OK Yes No NA
Sample Labels and COC Agree Yes No
COC not present

Sampler Name:		Signature:		Refrg #	# / Cont.	Volume	Preserv	Matrix	Comp/Grab													
EVAN YOUNG		<i>[Signature]</i>																				
Project Name:		Project Number:																				
LAP SOILS																						
Project Location:		Date Required																				
Lab PM:		Hard Copy: / /																				
Fax: / /																						
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab																
1		JPM3-1TF-AF1676	8/31	1015	S	G	X															

Additional Analyses / Remarks

2 DAY TAT
WD: 023
BOD: 4016

RELINQUISHED BY *[Signature]* COMPANY MWH DATE 8/31/06 TIME 1400
RELINQUISHED BY COMPANY DATE TIME

RECEIVED BY *[Signature]* COMPANY SR DATE 8/31/06 TIME 1330
RECEIVED BY COMPANY DATE TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
C =

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received 8/31/06
Courier: Hand Delivered
Bill of Lading

Job Number.: 248439 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.: Job Check List Date.: 08/31/2006 Date of the Report.: 09/20/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.: rcw
 Customer.: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?... Y	Y	
Custody seal on shipping container?..... N	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?..... N	N	
...If "yes", custody seal intact?.....		
Samples iced?..... Y	Y	
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.1	Y	
Samples received intact (good condition)?..... Y	Y	
volatile samples acceptable? (no headspace).....		
Correct containers used?..... Y	Y	
Adequate sample volume provided?..... Y	Y	
Samples preserved correctly?..... Y	Y	
Samples received within holding-time?..... Y	Y	
Agreement between COC and sample labels?..... Y	Y	
Radioactivity at or below background levels?..... Y	Y	
A Sample Discrepancy Report (SDR) was needed?..... N	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?.. N	N	
Sample Custodian Signature/Date..... Y	Y	

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only 248454 1 of 1

Contact: S. ROSY PAK / B. BROOKS
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: BUS. 423.6641
Fax:
E-Mail:

Contact:
Company:
Address:
Phone:
Fax:
PO#: _____ Quote:

Lab Lot# 248379

Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature °C of Cooler 4.2	
Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
pH Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Res Cl ₂ Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Labels and COC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No COC not present	

Sampler Name: RYAN YOUNG
Signature: *Ryan Young*
Project Name: LAP SOILS
Project Numbers:
Project Location:
Date Required:
Lab PM:
Hard Copy: _____
Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PAH	TOXIC Pb	TPH	Cu	Ref#	#/Cont.	Volume	Preserv	
			Date	Time											
1		JPM3-ITF-AF149(G)	8/28	1200	S	G	X	X							
2		AF150(G)		1205			X	X							
3		AF151(G)		1210			X	X							
4		AF152(G)		1215			X	X							
5		AF153(G)		1220			X	X	X	X					
6		AF154(G)		1225			X	X	X	X					
7		AF155(G)		1230			X	X							
8		JPM3-ITF-AP73(G)		1235			X	X							
9		AP74(L)		1240			X	X							
10		JPM3-ITF-AF153(G)-D		1220			X	X	X	X					

Additional Analyses / Remarks

2 DAY TAG
WB: 623
BDA: 4016

RELINQUISHED BY: *[Signature]* COMPANY: MWH DATE: 8/28/06 TIME: 1600

RECEIVED BY: *[Signature]* COMPANY: STA DATE: 8/28/06 TIME: 1615

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - CL = Oil
 - A = A⁻
 - SE = Sediment
 - SD = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wycemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: / /
Courier: STA Hand Delivered
Bill of Lading

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 248454

Client: JOAD

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
	samples obtained &		returned w/o	sig	9/13/06	

npjsckl	Job Sample Receipt Checklist Report		V2
Job Number.: 248654	Location.: 57222	Check List Number.: 1	Description.:
Customer Job ID.....:		Job Check List Date.: 09/01/2006	Date of the Report...: 09/05/2006
Project Number.: 20005627	Project Description.: JOAAP: LAP	Contact.: Brigid Brooks	Project Manager.....: rcw
Customer.....: MWH Americas, Inc.			
Questions ?	(Y/N) Comments		
Chain-of-Custody Present?.....	Y	relog	
Were samples dropped off at or picked up by STL?..			
Custody seal on shipping container?.....			
...If "yes", custody seal intact?.....			
Custody seals on sample containers?.....			
...If "yes", custody seal intact?.....			
Samples iced?.....			
Temperature of cooler acceptable? (4 deg C +/- 2).			
Samples received intact (good condition)?.....			
Volatile samples acceptable? (no headspace).....			
Correct containers used?.....			
Adequate sample volume provided?.....			
Samples preserved correctly?.....			
Samples received within holding-time?.....			
Agreement between CDC and sample labels?.....			
Radioactivity at or below background levels?.....			
A Sample Discrepancy Report (SDR) was needed?.....			
Residual Chlorine Check Required?			
If samples were shipped was there an air bill #?..			
Sample Custodian Signature/Date.....			

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248379 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 08/28/2006 Date of the Report.: 09/13/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MMH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?.. Y
 Custody seal on shipping container?..... Y
 ...If "yes", custody seal intact?..... Y
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.2
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?...
 Sample Custodian Signature/Date..... Y

SEVERN TRENT **STL**

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Bill To: **SAME**

Shaded Areas For Internal Use Only 1 of 1

Contact: **S. ROSY PAH / B. BROWN**
 Company: **MWR**
 Address: **JOLIET FIELD OFFICE**
 Phone: **815 423 6841**
 Fax:
 E-Mail:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 E-Mail:

Lab Lot# **248537**
 Package Sealed Yes (No)
 Sample Sealed Yes (No)
 Received on Ice Yes (No)
 Samples Intact Yes (No)
 Temperature (C) of Cooler **43**

Sampler Name: **RYAN SLONE**
 Project Name: **LAP SOILS**
 Project Location:
 Lab PM:

Signature: *[Signature]*
 Project Number:
 Date Required:
 Hard Copy:
 Fax:

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PAM	TCLP	EPA	Other	Comments
			Date	Time							
1		JPM3-ITF-AP77(C)	9/7	1445	S	G	X	X			
2		AP78(C)		1150	S	G	X				
3		JPM3-ITF-AT168(C)		1455	S	G	X				

Wagon Hold Time Yes (No)
 Preserv. Indicated Yes (No) NA
 pH Check OK Yes (No) NA
 Res. Cl. Check OK Yes (No) NA
 Sample Labels and CBC Acc. Yes (No)
 CBC not present

Additional Analyses / Remarks
2: DIAN TAT
WD: 023
BDA: 4016

RELINQUISHED BY: *[Signature]* COMPANY: **MWR** DATE: **9/7/06** TIME: **1500**

RECEIVED BY: *[Signature]* COMPANY: **STL** DATE: **9/7/06** TIME: **1510**

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 DS = Drum Spill
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O =

Container Key
 1. Plastic
 2. WOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widesmouth Glass
 6. Other
Preservative Key
 1. HCl, Cool to 4
 2. H2SO4, Cool to 4
 3. HNO3, Cool to 4
 4. NaOH, Cool to 4
 5. NaOH/Zn, Cool to 4
 6. Cool to 4
 7. None

COMMENTS

Date Received: **9/7/06**
 Courier: **STL** Hand Delivered
 Bill of Lading:

STL Chicago

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 248537

Client: JOAAP

8

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
		<i>All analyses performed without signatures</i>				<i>12-19-06</i>

rpjackl

Job Sample Receipt Checklist Report

V2

Job Number.: 248537 Location.: 57222 Check List Number.: 1 Description.:
Customer Job ID..... Job Check List Date.: 09/07/2006 Date of the Report...: 09/08/2006
Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?.. N

Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. RASYPAL / B. BROOKS
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: 815-423-6841
Fax:
E-Mail:

Bill To: SAME

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 248926

Package Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature °C of Cooler <u>4.3</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA <input checked="" type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA <input checked="" type="checkbox"/>	Res Cl. Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA <input checked="" type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> COC not present	

Sampler Name: Ryan Young Signature: [Signature]

Project Name: LAP SOILS Project Number:

Project Location: Date Required

Lab PM: Hard Copy: Fax:

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Preservative		
			Date	Time			TOTAL Pb	TCLP	PAH
1		JPM3-ITF-AF171	9/29	1110	S	G	X		X
2		AF173	9/29	1120				X	X
3		AF175	9/29	1130				X	X
4		JPM3-ITF-AP 88	9/29	1200				X	X
5		JPM3-ITF-AF169		1100					X
6		AF170		1105					X
7		AF172		1115					X
8		AF176		1135					X
9		AF177		1140					X
10		AF178		1145					X
11		AF179		1150					X

Additional Analyses / Remarks

2 DAY TAG

WO: 623

BOA: 4816

RELINQUISHED BY: <u>[Signature]</u> COMPANY: <u>MWH</u> DATE: <u>9/29/06</u> TIME: <u>1630</u>	RECEIVED BY: <u>[Signature]</u> COMPANY: <u>STL</u> DATE: <u>9/29/06</u> TIME: <u>1545</u>
RELINQUISHED BY: COMPANY: DATE: TIME:	RECEIVED BY: COMPANY: DATE: TIME:

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
- Plastic
 - VDA Vial
 - Sterile Plastic
 - Amber Glass
 - Widemouth Glass
 - Other

- Preservative Key**
- HCl, Cool to 4°
 - H2SO4, Cool to 4°
 - HNO3, Cool to 4°
 - NaOH, Cool to 4°
 - NaOH/Zn, Cool to 4°
 - Cool to 4°
 - None

COMMENTS:

Date Received 9/29/06

Courier: STL Hand Delivered

Bill of Lading:

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 248926 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 09/29/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 10/02/2006
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?.. Y

Custody seal on shipping container?..... N

....If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

....If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?.. N

Sample Custodian Signature/Date..... Y

rpjsckl	Job Sample Receipt Checklist Report			V2
Job Number.: 248927	Location.: 57222	Check List Number.: 1	Description.:	
Customer Job ID.....:	Project Description.: JOAAP: LAP	Job Check List Date.: 09/29/2006	Date of the Report...: 10/11/2006	
Project Number.: 20005627	Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks	Project Manager.....: rcw	
Questions ?	(Y/N) Comments			
Chain-of-Custody Present?.....	Y			
Were samples dropped off at or picked up by STL?..	Y			
Custody seal on shipping container?.....	N			
...If "yes", custody seal intact?.....				
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples iced?.....	Y			
Temperature of cooler acceptable? (4 deg C +/- 2)..	Y 4.3			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....				
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Radioactivity at or below background levels?.....	Y			
A Sample Discrepancy Report (SDR) was needed?.....	N			
Residual Chlorine Check Required?				
If samples were shipped was there an air bill #?..	N			
Sample Custodian Signature/Date.....	Y			

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street COC: 100206A
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. ROSYPAL / B. BROOKS
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: 615-423-6841
Fax:
E-Mail:

Bill To: SAME

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 2

Lab Lot# 248981

Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature °C of Cooler <u>4.6</u>	
Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>NA</u>
pH Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>NA</u>	Res Cl ₂ Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>NA</u>
Sample Labels and COC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>COC not present</u>	

Sampler Name:		Signature:		Refrg #														
<u>RYAN KUNG</u>		<u>[Signature]</u>		# / Cont.														
Project Name:		Project Number:		Volume														
<u>LAP SOILS</u>		<u>[Signature]</u>		Preserv														
Project Location:		Date Required		Matrix	Comp/Grab	TOTAL	P	A	A	A	A	A	A	A	A	A	A	A
Lab PM:		Hard Copy: ___/___/___ Fax: ___/___/___																
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time														
<u>1</u>		<u>JPM3-ITF-AF180(2)</u>	<u>10/3</u>	<u>900</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>X</u>										
<u>2</u>		<u>AF181(2)</u>		<u>905</u>			<u>X</u>	<u>X</u>										
<u>3</u>		<u>AF182(2)</u>		<u>910</u>			<u>X</u>	<u>X</u>										
<u>4</u>		<u>AF183(2)</u>		<u>915</u>			<u>X</u>	<u>X</u>										
<u>5</u>		<u>AF184(2)</u>		<u>920</u>			<u>X</u>	<u>X</u>										
<u>6</u>		<u>AF185(2)</u>		<u>925</u>			<u>X</u>	<u>X</u>										
<u>7</u>		<u>AF186(2)</u>		<u>930</u>			<u>X</u>	<u>X</u>										
<u>8</u>		<u>AF187(2)</u>		<u>935</u>			<u>X</u>	<u>X</u>										
<u>9</u>		<u>AF188(2)</u>		<u>940</u>			<u>X</u>	<u>X</u>										
<u>10</u>		<u>AF189(2)</u>		<u>945</u>			<u>X</u>	<u>X</u>										
<u>11</u>		<u>AF190(2)</u>		<u>950</u>			<u>X</u>	<u>X</u>										
<u>12</u>		<u>AF191(2)</u>		<u>955</u>			<u>X</u>	<u>X</u>										

Additional Analyses / Remarks

2 DAY TAT

WD: 023

BOA: 4 D16

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 10/3/06 TIME: 1530

RECEIVED BY: [Signature] COMPANY: STL DATE: 10/3/06 TIME: 1700

Matrix Key

WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air

SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O =

Container Key

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key

1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received: 11/1

Courier: STL Hand Delivered [Signature]

Bill of Lading

SEVERN TRENT STL

STL Chicago COC: 100306 B
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. ROSYPAL | B BROOKS
 Company: MWH
 Address: JOHN F. KELLY OFFICE
 Phone: 815-423-1684
 Fax:
 E-Mail:

Bill To: SAME

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only 2 of 2

Lab Lot# 248981

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler <u>4.6</u>	
Within Hold Time Yes No	Preserv. Indicated Yes No <u>NA</u>
pH Check OK Yes No <u>NA</u>	Res. Cl. Check OK Yes No <u>NA</u>
Sample Labels and COC Agree Yes No <u>NA</u> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	TOTAL Pb		PAH	Refr #	# / Cont	Volume	Preserv
			Date	Time									
<u>13</u>		<u>JPM3-ITF-APB1(C)</u>	<u>10/3</u>	<u>1000</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>X</u>					
<u>14</u>		<u>APB2(C)</u>	<u>↓</u>	<u>1005</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>X</u>					
<u>15</u>		<u>APB3(L)</u>	<u>↓</u>	<u>1010</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>X</u>					
<u>16</u>		<u>AP18(L2)D</u>	<u>↓</u>	<u>0930</u>			<u>X</u>	<u>X</u>					

Additional Analyses / Remarks

2 DAY TAT

WD: 023

BDA: 4/16

ADDED BY JAT

RELINQUISHED BY [Signature] COMPANY MWH DATE 10/3/06 TIME 1530

RECEIVED BY [Signature] COMPANY SSL DATE 10/3/06 TIME 1700

- | | | |
|---|--|---|
| Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = | Container Key
1. Plastic
2. WOA Vial
3. Sterile Plastic
4. Amber Glass
5. W/zermouth Glass
6. Other | Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None |
|---|--|---|

COMMENTS

Date Received 10/3/06

Courier _____ Hand Delivered

Bill of Lading _____

rpjsskl

Job Sample Receipt Checklist Report

V2

Job Number.: 248981 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 10/03/2006
 Project Number.: 20005627 Project Description.: JDAAP: LAP Date of the Report.: 10/06/2006
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks Project Manager.....: rcw

Questions ? (Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.6
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check required?
- If samples were shipped was there an air bill #?..
- Sample Custodian Signature/Date..... Y

SEVERN
TRENT
STL

STL Chicago 6061055064
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. Posypala B. Brown
Contact: M.Way
Company: JOHN FLEMOR INC
Address: _____
Phone: 616-423-6841
Fax: _____
E-Mail: _____

Bill To: SAWE
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
Quote: _____

Shaded Areas For Internal Use Only 1 of 2
Lab Lot# 2489025
Package Sealed Yes No
Samples Spilled Yes No
Received on ice Yes No
Samples Intact Yes No
Temperature °C of Cooler 42

Sampler Name: Dylan Jones
Project Name: LAP SOILS
Project Location: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Signature: [Signature]
Project Number: _____

Rating #	# / Cont.	Volume	Preserve

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Matrix	Comp/Grab	As	Cu	Zn, Ba, Sb, Th	TNB	TPH	8330
1		JPM3-1TF-AF192(G)	800	S	G						
2		AF193(G)	805			X					
3		AF194(G)	810			X					
4		AF195(G)	815		X						
5		AF196(G)	820			X					
6		AF197(G)	825			X		X			
7		AF198(G)	830			X					
8	X	AF199(G)	835			X					
9		AF200(G)	840			X					
10		AF201(G)	845		X		X				
11		AF202(G)	850			X			X		
12		DPAG-1TF-AP85(G)	900			X					

Additional Analyses / Remarks
2 DAY TAT
WD: 023
BO4: 4010

RELINQUISHED BY: [Signature] COMPANY: MW DATE: 10/10/06 TIME: 5:20
RECEIVED BY: [Signature] COMPANY: SAWE DATE: 10/16/06 TIME: 11:52

- Matrix Key**
- SE = Sediment
 - SO = Soil
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Waste
 - 0 =

- Container Key**
- 1. Plastic
 - 2. VOA Vial
 - 3. Sterile Plastic
 - 4. Amber Glass
 - 5. Widenmouth Glass
 - 6. Other

- Preservative Key**
- 1. HCl, Cool to 4°
 - 2. H2SO4, Cool to 4°
 - 3. HNO3, Cool to 4°
 - 4. NaOH, Cool to 4°
 - 5. NaOH/Zn, Cool to 4°
 - 6. Cool to 4°
 - 7. None

COMMENTS: _____
Date Received: 10/15/06
Courier: STC
Hand Delivered: [Signature]
Bill of Lading: _____

rpjsckl	Job Sample Receipt Checklist Report	V2
Job Number.: 249025	Location.: 57222	Check List Number.: 1
Customer Job ID.....		Description.:
Project Number.: 20005627	Project Description.: JOAAP: LAP	Job Check List Date.: 10/05/2006
Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks	Date of the Report...: 10/12/2006
		Project Manager.....: rcw
Questions ?	(Y/N) Comments	
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.2
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 249072	Location.: 57222	Check List Number.: 1	Description.:	Date of the Report.: 10/12/2006
Customer Job ID.....:		Job Check List Date.: 10/10/2006		Project Manager.....: rcw
Project Number.: 20005627	Project Description.: JOAAP: LAP			
Customer.....: MWH Americas, Inc.		Contact.: Brigid Brooks		

Questions ?	(Y/N) Comments
-------------	----------------

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?.. Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.4

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?.. N

Sample Custodian Signature/Date..... Y

SEVERN
TRENT
STL

STL Chicago COC:101306

2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To:

CANES

Shaded Areas For Internal Use Only

of 1

Contact: C. Pals / P. B. BLOWS
Company: MWH
Address: JONESTOWN OFFICE

Contact: _____
Company: _____
Address: _____

Phone: 615-423-6841

Phone: _____

Fax: _____

Fax: _____

Email: _____

PO#: _____
Quote: _____

Sampler Name: DANNONB
Project Name: LAP SDILS
Project Number: _____

Signature: [Signature]

Project Location: _____
Date Required: _____
Hard Copy: _____
Lab Pkt: _____
Fax: _____

Refill # _____
/ Cont. _____
Volume _____
Preserv. _____

Wight-Hold Time: Yes No
pH Check OK: Yes No NA
Sample Labels and COC Agree: Yes No NA
COC not present: Yes No

Temperature °C of Cooler: 3.9
Package Sealed: Yes No
Repacked on Ice: Yes No
Samples Intact: Yes No

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	Additional Analyses / Remarks
1		JPM3-CP3-16	10/13	1306	S	G	2 DAY TAR
2				17			WD: 02-3
3	X			18			POA: 4 Bire
4				19			
5				20			
6				21			
7	X			22			
8				23			

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 10/13/06 TIME: 1800
RECEIVED BY: [Signature] COMPANY: [Signature] DATE: 10/13/06 TIME: 1800

Matrix Key

- WW = Wastewater
- W = Water
- S = Soil
- SL = S-Ludge
- MS = Miscellaneous
- OL = Oil
- A = Air

Container Key

1. Plastic
2. WOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widenmouth Glass
6. Other

Preservative Key

1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received: 10/13/06 Hand Delivered:
Counter: STL Bill of Lading: _____

STL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 299144

Client: Shrimp

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-6	metals	[Signature]	Jin Peete	10/11/06	0825	
1-8	metals	[Signature]	[Signature]	10/16/06	12:00	
1-8	8330	[Signature]	[Signature]	10/15/06	1900	
1-8	8330	[Signature]	[Signature]	10/15/06	2000	

STL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249144

Client: SOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-8	digestion ICP	Joe Poble	T. Sen	10/16/06	15:00	
1-8	ICP	T. Sen	Am 5/11	10/19/08	15:30	

rpjsckl	Job Sample Receipt Checklist Report	V2
Job Number.: 249144	Location.: 57222	Check List Number.: 1
Customer Job ID.....:		Description.: 10/14/2006
Project Number.: 20005627	Project Description.: JOAAP: LAP	Date of the Report...: 10/20/2006
Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks	Project Manager.....: rcw
Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	3.9
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

SEVERN
TRENT
STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5800
Fax: 708-534-5211

Report To: **DMW**
Contact: **S. P. S. P. H. & B. Books**
Company: **MWH**
Address: **601 S. RENO AVE**
Phone: **615.423.6841**
Fax: _____
E-Mail: _____

Bill To: **DMW**
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____
Quote: _____

Sampler Name: **WASTEWATER**
Project Name: **LAP 501 S**
Project Location: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Signature: *[Signature]*
Project Number: _____
Matrix: **PAH**
Comp/Grab: **20**

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix		Preservative		Comments
					Comp	Grab	Vol	Pres	
1		JPMS-1TF-AP213 (2)	10/17	900	S	G			
2		AF214 (2)		905	X	X	X	X	
3	X	AF215 (2)		910	X	X	X	X	
4		AF216 (2)		915	X	X	X	X	
5		AF217 (2)		920	X	X	X	X	
6		AF218 (2)		925	X	X	X	X	
7		AF219 (2)		930	X	X	X	X	
8	X	AF220 (2)		935	X	X	X	X	
9		AF221 (2)		940	X	X	X	X	
10		JPMS-1TF-AP906 (2)		945	X	X	X	X	
11		AP 91 (2)		950	X	X	X	X	
12		JPMS-1TF-AP221 (2)		940	X	X	X	X	

Lab Lot#: **219122**
 Packages Sealed: Yes No
 Received on Ice: Yes No
 Temperature: **7** C of Cooler
 Within Hold Time: Yes No
 pH Check OK: Yes No
 Sample Labels and COC Agree: Yes No
 COC not present: Yes No
 Preserv. Indicated: Yes No
 Res. Cl. Check OK: Yes No

Additional Analyses / Remarks
2 DAY TAT
NO: 023
BDA: 4016

RELINQUISHED BY: *[Signature]* COMPANY: **MWH** DATE: **10/17/06** TIME: **1530**
 RECEIVED BY: *[Signature]* COMPANY: **DMW** DATE: **10/17/06** TIME: **1700**

- Matrix Key**
- WW - Wastewater
 - W - Water
 - S - Soil
 - SL - Sludge
 - MS - Miscellaneous
 - OL - Oil
 - A - Air

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wintrenath Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS: _____
 Date Received: _____
 Counter: **STL**
 Bill of Lading: _____
 Date Delivered: _____

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249172

Client: J&AAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-12	digestion ICP	Jin Peelles T. Pen	T. S. M. R. S. 172	10/18/06	1300	
1-12				10/18/06	12:00	

rpjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 249177	Location.: 57222	Check List Number.: 1	Description.:	
Customer Job ID.....:		Job Check List Date.: 10/17/2006	Date of the Report...: 10/20/2006	
Project Number.: 20005627	Project Description.: JOAAP: LAP		Project Manager.....: rcw	
Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks			
Questions ?	(Y/N)	Comments		
Chain-of-Custody Present?.....	Y			
Were samples dropped off at or picked up by STL?..	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples iced?.....	Y			
Temperature of cooler acceptable? (4 deg C +/- 2). Y	4.2			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....				
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Radioactivity at or below background levels?.....	Y			
A Sample Discrepancy Report (SDR) was needed?.....	N			
Residual Chlorine Check Required?				
If samples were shipped was there an air bill #?..				
Sample Custodian Signature/Date.....	Y			

SEVERN TRIENT
STL

STL Chicago COC:1D1306
2417 Bond Street
University Park, IL 60465
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: **CANUS**

Shaded Areas For Internal Use Only

Contact: **C. PASI PAUL B. BOOVS**
Company: **MWH**
Address: **JANET PAVEN OFFICE**

Contact: _____
Company: _____
Address: _____

Phone: **615-423-6841**
Fac: _____
E-Mail: _____

Phone: _____
Fac: _____
PO#: _____
Quote: _____

Sampler Name: **DYANBOVS**
Project Name: **LAP SOILS**

Signature: *[Signature]*
Project Number: _____

Project Location: _____
Date Received: _____
Hard Copy: _____
Fac: _____

Laboratory ID	MS-MBD	Client Sample ID	Sampling Date	Sampling Time	Matrix		Wet	Dry	Total	Other
					Comp	Grab				
1		JPM3-CPT-14	10/13	1306	S	G	X	X	X	X
2				17			X	X	X	X
3	X			18			X	X	X	X
4				19			X	X	X	X
5				20			X	X	X	X
6				21			X	X	X	X
7				22			X	X	X	X
8	X			23			X	X	X	X

Lab Lot# **249114**

Package Sealed: Yes No

Repacked in bag: Yes No

Temperature: **39** °C

Wet/Dry Tins: Yes No

pH Check: Yes No

Sample Labels and GOC Agree: Yes No

Preserv. Indica: Yes No

Res. Cl. Check: Yes No

GOC not pres.: Yes No

Additional Analyses / Remarks

2 DAY TAR

WD: 9/23

ROA: 4 PLS

RECEIVED BY: *[Signature]* DATE: **10/13/06** TIME: **12:00**

RECEIVED BY: *[Signature]* DATE: _____ TIME: _____

DATE RECEIVED: **10/13/06** TIME: **18:00**

- Matrix Key**
- SE = Sediment
 - SO = Soil
 - DL = Drum Spill
 - L = Leachate
 - WI = Wipe
 - Q =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. W/Leachate Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

DATE RECEIVED: **10/13/06** TIME: **18:00**

Courier: **STL** Hand Delivered

Bill of Lading

Job Number.: 249183	Location.: 57222	Check List Number.: 1	Description.:	
Customer Job ID.....:		Job Check List Date.: 10/18/2006		Date of the Report...: 10/20/2006
Project Number.: 20005627	Project Description.: JOAAP: LAP			Project Manager.....: rcw
Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks			

Questions ?	(Y/N) Comments
-------------	----------------

Chain-of-Custody Present?.....	Y RELOG
Were samples dropped off at or picked up by STL?..	
Custody seal on shipping container?.....	
...If "yes", custody seal intact?.....	
Custody seals on sample containers?.....	
...If "yes", custody seal intact?.....	
Samples iced?.....	
Temperature of cooler acceptable? (4 deg C +/- 2).	
Samples received intact (good condition)?.....	
Volatile samples acceptable? (no headspace).....	
Correct containers used?.....	
Adequate sample volume provided?.....	
Samples preserved correctly?.....	
Samples received within holding-time?.....	
Agreement between COC and sample labels?.....	
Radioactivity at or below background levels?.....	
A Sample Discrepancy Report (SDR) was needed?.....	
Residual Chlorine Check Required?	
If samples were shipped was there an air bill #?..	
Sample Custodian Signature/Date.....	

Job Number.: 249144 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 10/14/2006 Date of the Report.: 10/30/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?.. Y
 Custody seal on shipping container?..... N
 ...If "yes", custody seal intact?.....
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 3.9
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?.. N
 Sample Custodian Signature/Date..... Y

SEVERN TRENT
STIL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: **AMZ**

Contact: **S. Rosyhar**
Company: **MWH**
Address: **John Hancock**
Phone: **615-423-6841**
Fax: _____
E-Mail: _____

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
F0#: _____
Order: _____

Sampler Name: **Ryan Yonks**
Project Name: **LAP SDCS**
Project Locations: _____
Lab PM: _____

Signature: *[Signature]*
Project Number: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Laboratory ID	MS-M5D	Client Sample ID	Date	Sampling Time	Matrix	Comp/Grab	8338	TCLP Pb	PAH	TOTAL Pb	Cy	CADMIUM	ARSENIC
1		JPM3-ITF-CPI-10	11/1	0836	S	G		X	X	X			
2				0935	1	1		X	X	X			
3				0940				X	X	X			
4				0945	X			X	X	X			
5				0950	X			X	X	X			
6				0955	X			X	X	X			
7				1004	X			X	X	X			
8				1005	X			X	X	X			
9				1014	X			X	X	X			
10				1015	X			X	X	X			
11				1020	X			X	X	X			
12				1025	X			X	X	X			

Lab Lot# **249398** of **91**

Package Sealed: Yes No
 Received on ice: Yes No
 Temperature: **4.5** C of Cooler
 Within Hold Time: Yes No
 Preser. Indicated: Yes No
 pH checked OK: Yes No
 Res. Cl. Check OK: Yes No
 Sample: Half and 95 Agave GSC not present

Additional Analyses / Remarks: **2. DAY TAST**
WD-823
BDA-4B18

DATE RECEIVED: **11/1/06** TIME: **1600**
 RECEIVED BY: *[Signature]*
 COMMENTS: _____
 DATE DELIVERED: **11/1/06** TIME: **11:06**
 COURIER: **STL** HAND DELIVERED:
 BILL OF LADING: _____

- Matrix Key**
- WV = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - CL = Oil
 - A = Air
- Container Key**
- 1. Plastic
 - 2. HOA Vial
 - 3. Sterile Plastic
 - 4. Amber Glass
 - 5. Wadsworth Glass
 - 6. Other
 - 7. None
- Preservative Key**
- 1. HCl, Cool to 4°
 - 2. H2SO4, Cool to 4°
 - 3. HNO3, Cool to 4°
 - 4. NaOH, Cool to 4°
 - 5. NaOH/Zn, Cool to 4°
 - 6. Cool to 4°

SEVERN TRENT
STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: **S. ROSEBART**
Company: **MWH**
Address: **JULY 17 FLOW SERVICE**
Phone: **615-423-6841**
Fax: _____
E-Mail: _____

Bill To: **GAWE**
Company: _____
Address: _____
Phone: _____
Fax: _____
E-Mail: _____

Contact: **S. ROSEBART**
Company: **MWH**
Address: **JULY 17 FLOW SERVICE**
Phone: **615-423-6841**
Fax: _____
E-Mail: _____

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
E-Mail: _____

Project Name: **LAP SOILS**
Project Location: _____
Date Required: _____
Hand Copy: _____
Fac: _____

Sampler Name: **DYAN VONK**
Signature: _____
Project Number: _____

Lab Pmt.	Client Sample ID	Sampling Date	Matrix	Comp/Grab	Retrieval	Volume	Preserve	PAH	CH	ARSENIC	CADMIUM
MS MSD	JPM3-ITF-CPI-130	10/30	S	G	8330						
	13	10/25	X	X							
	14	10/25	X	X							
	15	10/25	X	X							
	16	10/25	X	X							
	17	10/25	X	X							
	18	10/25	X	X							
	19	11/05	X	X							
	20	11/05	X	X							
	21	11/10	X	X							

RELINQUISHED BY: **Paul MWH**
COMPANY: **MWH**
DATE: **11/10/06**
TIME: **11:00**

RECEIVED BY: **[Signature]**
COMPANY: **[Signature]**
DATE: **11/20/06**
TIME: **16:00**

Matrix Key
SE = Sediment
SO = Soil
DS = Drum Solid
DL = Drum Liquid
L = Leachate
MI = Wipe
0 =

Container Key
1. Plastic
2. VOA Vial
3. Sealed Plastic
4. Amber Glass
5. Widesmouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:
Date Received: **11/1/06**
Counter: **STL**
Hand Delivered: **[Signature]**
Bill of Lading: **[Signature]**

rpjsckl	Job Sample Receipt Checklist Report	V2
Job Number.: 249398	Location.: 57222	Check List Number.: 1
Customer Job ID.....:	Job Check List Date.: 11/01/2006	Description.:
Project Number.: 20005627	Project Description.: JOAAP: LAP	Date of the Report...: 11/03/2006
Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks	Project Manager.....: rcw
Questions ?	(Y/N) Comments	
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2). Y	4.3	
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

SEVERN TRENT
STIL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: **CANE**

Shaded Areas For Internal Use Only

Contact: **S. Adhyapa**
Company: **MWH**
Address: **10101 W. 111th St.**
Phone: **815-423-6641**
Fax: **815-423-6641**

Contact: **S. Adhyapa**
Company: **MWH**
Address: **10101 W. 111th St.**
Phone: **815-423-6641**
Fax: **815-423-6641**

Sampler Name: **BLANK BOTTLES**
Project Name: **LAP SOILS**
Project Location: **DATE REQUIRED**
Date Required: **HARD COPY**
Lab P/N: **FAV**

Signature: *[Signature]*
Project Number: **1113**

Laboratory ID	Client Sample ID	Date	Sampling Time	Matrix	Comp/Grab	Volume	Filter	Preservative	Temperature	Additional Analyses / Remarks
MS MSD	JPM 1-11F - AC 235 (2)	11/3	1030	S	G	100ml	0.45	None	42	2 DAY TAT
	AC 236 (2)		1035	S	G	100ml	0.45	None	42	W.O. 0223
	AC 237 (6)		1040	S	G	100ml	0.45	None	42	
	AC 238 (6)		1045	S	G	100ml	0.45	None	42	
	AC 239 (2)		1050	S	G	100ml	0.45	None	42	BDA 4B1b
	AC 240 (6)		1055	S	G	100ml	0.45	None	42	
	AC 241 (6)		1100	S	G	100ml	0.45	None	42	

RELINQUISHED BY: **SA**
RECEIVED BY: **[Signature]**
DATE: **11/3/06** TIME: **6:30**
COMPANY: **MWH**

DATE RECEIVED: **11/3/06** TIME: **10:06**
DATE DELIVERED: **11/3/06**

Matrix Key:
WV - Wastewater
WL - Water
S - Soil
SL - Sludge
MS - Miscellaneous
OL - Oil
A - Air

Container Key:
1 - Plastic
2 - 40A Vial
3 - Sterile Plastic
4 - Amber Glass
5 - Wagonmount Glass
6 - Other

Preservative Key:
1 - HCl, Cool to 4°
2 - H2SO4, Cool to 4°
3 - HNO3, Cool to 4°
4 - NaOH, Cool to 4°
5 - NaOH/Zn, Cool to 4°
6 - Cool to 4°
7 - None

Additional Analyses / Remarks:
Sample Labels and COC/AR/EE
GOC/MD Present

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 249439	Location.: 57222	Check List Number.: 1	Description.:	Date of the Report.: 11/22/2006
Customer Job ID.....:		Job Check List Date.: 11/03/2006		Project Manager.....: rcw
Project Number.: 20005627	Project Description.: JOAAP: LAP			
Customer.....: MWH Americas, Inc.		Contact.: Brigid Brooks		

Questions ?	(Y/N) Comments
-------------	----------------

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?.. Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.2

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?..... N

If samples were shipped was there an air bill #?.. N

Sample Custodian Signature/Date..... Y

SEVERN
TRENT
STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. Bosnyak
Contact: MWH
Company: Water Resources
Address: John F. Kennedy

Report To: CAUSE
Contact: _____
Company: _____
Address: _____

Phone: 815-423-6841
Fax: _____
E-Mail: _____

Phone: _____
Fax: _____
Quote: _____

Sampler Name: DYAN VOUNT
Signature: [Signature]
Project Name: LAP SOILS
Project Number: _____

Project Location: _____
Data Required: _____
Hard Copy: _____
Fac: _____

Matrix: _____
Comp/Grab: _____
of Containers: _____
of Samples: _____
of Preservatives: _____

Lab Lot# 249398-2
Package Sealed: Yes No
Received on Ice: Yes No
Temperature of Cooler: _____
Initial Hold Time: Yes No
pH Check OK: Yes No
Sample Labels and CDC Agree: Yes No
Additional Analyses / Remarks: _____

LABORATORY ID	CLIENT SAMPLE ID	SAMPLING DATE	TIME	MATRIX	COMP/GRAB	RESIDUALS	PRELIMINARY RESULTS	FINAL RESULTS	REMARKS
M5-M5D	JPM3-ITF-CP1-136	11/11	1030	S	G	8330	PAH	CA, Cd, Mn	2 DAY TAR
	146	1035	1040	X	X	X	X	X	WD: 623
	156	1045	1050	X	X	X	X	X	BDA: 4016
	166	1055	1100	X	X	X	X	X	
	176	1105	1110	X	X	X	X	X	
	186			X	X	X	X	X	
	196			X	X	X	X	X	
	206			X	X	X	X	X	
	216			X	X	X	X	X	

RELINQUISHED BY: [Signature] DATE: 11/10/06 TIME: 11:00
RECEIVED BY: [Signature] DATE: 11/20/06 TIME: 11:00
COMPANY: MWH COMPANY: STL

- Matrix Key**
- WV = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air

- Container Key**
1. Plastic
 2. NCA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wilmouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. Name

COMMENTS: _____
Data Received: 11/1/06
Counter: STL Hand Delivered
Bill of Lading: _____

SEVERN
TRENT
STL

STL Chicago
2417 Bond Street
University Park, IL 60465
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: **SAVE**

Shaded Areas For Internal Use Only

Contact: **S. Rosipal**
Company: **KWH**
Address: **DELTA FLD STLS**
Phone: **815-423-6001**
Fax: _____
Email: _____

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____
Quote: _____

Lab Lot# **2494392**
 Package Sealed: Yes No
 Reprinted on file: Yes No
 Temperature: **4.2** °C of Cooler
 Samples Analyzed: Yes No
 Samples Intact: Yes No
 Preserve Indicated: Yes No
 Ret. Check OK: Yes No
 Sample Status and CDC Agree: Yes No
 CDC not present: Yes No

Sampler Name: **Dyan York**
Project Name: **LAP SOILS**
Project Location: _____
Lab P#: _____

Signature: _____
Project Number: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Lab ID	MSD	Client Sample ID	Sampling Date	Matrix	Comp/Grab	PAH	Additional Analyses / Remarks
1	X	AF 236 (2)	1035	S	G	Y	2 DAY TEST
2	X	AF 237 (6)	1040	S	G	Y	W.O. #23
3	X	AF 238 (6)	1045	S	G	Y	
4	X	AF 239 (2)	1050	S	G	Y	BDA: 4P16
5	X	AF 240 (6)	1055	S	G	Y	
6	X	AF 241 (2)	1100	S	G	Y	

RELINQUISHED BY: **[Signature]** COMPANY: **MWH** DATE: **11/30** TIME: **1:50**
 RECEIVED BY: **[Signature]** COMPANY: **STL** DATE: **11/30** TIME: **6:30**

- Matrix Key**
- SE = Sediment
 - SO = Soil
 - DV = Dredged Material
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O = Other
- Container Key**
- Pestic
 - VCR Vial
 - Shelf Plastic
 - Amber Glass
 - Waterproof Glass
 - Other
- Preservative Key**
- HCl, Cool to 4°
 - H2SO4, Cool to 4°
 - HNO3, Cool to 4°
 - NaOH, Cool to 4°
 - NaOH/Zn, Cool to 4°
 - Cool to 4°
 - None

COMMENTS: _____
 Date Received: **11/3/06**
 Courier: **STL**
 Bill of Lading: _____
 Hand Delivered:

24947167

rpjsckl	Job Sample Receipt Checklist Report	V2
Job Number.: 249477	Location.: 57222	Check List Number.: 1
Customer Job ID.....:	Job Check List Date.: 11/08/2006	Description.: 11/10/2006
Project Number.: 20005627	Project Description.: JOAAP: LAP	Date of the Report.: 11/10/2006
Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks	Project Manager.....: rcw
Questions ?	(Y/N) Comments	
Chain-of-Custody Present?.....	Y	relog
Were samples dropped off at or picked up by STL?..	N	
Custody seal on shipping container?.....		
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....		
...If "yes", custody seal intact?.....		
Samples iced?.....		
Temperature of cooler acceptable? (4 deg C +/- 2).		
Samples received intact (good condition)?.....		
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....		
Adequate sample volume provided?.....		
Samples preserved correctly?.....		
Samples received within holding-time?.....		
Agreement between COC and sample labels?.....		
Radioactivity at or below background levels?.....		
A Sample Discrepancy Report (SDR) was needed?.....		
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..		
Sample Custodian Signature/Date.....		

Job Number.: 249398 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 11/01/2006 Date of the Report...: 11/24/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?.. Y
 Custody seal on shipping container?..... N
 ...If "yes", custody seal intact?.....
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?.. N
 Sample Custodian Signature/Date..... Y

SEVERN TREATMENT
STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: SAWE

Shaded Areas for Internal Use Only

Contact: S. Rosypal / R. Brooks
Company: MWH
Address: POLYMER AND SPDS

Contact: _____
Company: _____
Address: _____

Phone: 615.423.6841
Fax: _____
E-Mail: _____

Phone: _____
Fax: _____
PO#: _____
Quote: _____

Sampler Name: RYAN YOUNG
Signature: *[Signature]*

Project Name: LAP SOILS
Project Number: _____

Project Location: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Laboratory ID	MS MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix		Matrix Comp/Grab	PAH	B	TCLP	Retention #	#/Cont.	Volume	Preserv	
1		JPM3-ITF-AE 242 (2)	11/8	1100	S	G	X								
2		AE 243 (2)		1105			X								
3	X	AE 244 (2)		1110			X								
4		AE 245 (2)		1115			X		X						
5		AE 246 (2)		1120			X								
6	X	AE 247 (2)		1125			X								
7		AP 92 (2)		1130			X		X						
8		AP 93 (2)		1135			X		V						
9		JPM3-ITF-AE 244 (2)		1110			X								

RELINQUISHED BY: *[Signature]* COMPANY: MWH DATE: 11/8/06 TIME: 1600
RECEIVED BY: *[Signature]* COMPANY: STL DATE: 11/8/06 TIME: 1530

Matrix Key

- WV = Wastewater
- W = Water
- S = Soil
- SL = Sludge
- MS = Miscellaneous
- OL = Oil
- A = Air

Container Key

- 1. Plastic
- 2. WQA Vial
- 3. Sterile Plastic
- 4. Amber Glass
- 5. Wide-mouth Glass
- 6. Other

Preservative Key

- 1. HCl, Cool to 4°
- 2. H2SO4, Cool to 4°
- 3. HNO3, Cool to 4°
- 4. NaOH, Cool to 4°
- 5. NaOH/Zn, Cool to 4°
- 6. Cool to 4°
- 7. None

COMMENTS:

2 DAY TAT
WD: 823
BDA: 4816

Date Received: 11/8/06
Time: 1530

Counter: STL
Hand Delivered:
Bill of Lading:

STL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249487

Client: John

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-9	GC MUTUAL	Robert P Adams	Jeffrey Adams	11/18/00	2100	returned 11/23/00

rpjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 249487	Location.: 57222	Check List Number.: 1	Description.:	
Customer Job ID.....:		Job Check List Date.: 11/08/2006	Date of the Report...: 11/10/2006	
Project Number.: 20005627	Project Description.: JOAAP: LAP	Contact.: Brigid Brooks	Project Manager.....: rcw	
Customer.....: MWH Americas, Inc.				
Questions ?	(Y/N)	Comments		
Chain-of-Custody Present?.....	Y			
Were samples dropped off at or picked up by STL?..	Y			
Custody seal on shipping container?.....	N			
...If "yes", custody seal intact?.....				
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples iced?.....	Y			
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.3		
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....				
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Radioactivity at or below background levels?.....	Y			
A Sample Discrepancy Report (SDR) was needed?.....	N			
Residual Chlorine Check Required?				
If samples were shipped was there an air bill #?..	N			
Sample Custodian Signature/Date.....	Y			

SEVERN
TRENT

STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. B. Raymond, B. Brooks
Company: MWI
Address: DOWT FLEW OFFICE

Bill To: MWI
Address: 215-423 6 & 41

Contact: S. B. Raymond, B. Brooks
Phone: 215-423 6 & 41

Contact: S. B. Raymond, B. Brooks
Company: MWI
Address: DOWT FLEW OFFICE

Contact: S. B. Raymond, B. Brooks
Company: MWI
Address: DOWT FLEW OFFICE
Phone: 215-423 6 & 41
Fax: 708-534-5211

Sampler Name: DWYKOFF
Project Name: LAP SOILS
Signature: *[Handwritten Signature]*
Project Number: _____

Project Location: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Ref. #	# / Cont	Volume	Matrix	Comp/Grab
			OG	x
			8330	x
			TOTAL Pb	x
			Pb TCLP	x

Laboratory ID	MS MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	Preserv	Volume	Matrix	Comp/Grab
1		JPL2-AS4	11/17	1330	OG	x			OG	x

RECEIVED BY: *[Handwritten Signature]*
DATE: 11/17/06
TIME: 1600

RECEIVED BY: *[Handwritten Signature]*
DATE: 11/17/06
TIME: 1600

COMMENTS: 2 DAY TAT
W0: 023
BOA: 4011

DATE RECEIVED: 11/17/06
DATE: 11/17/06
TIME: 1600

Matrix Key:
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air

Container Key:
1. Plastic
2. YCA Vial
3. Sterile Plastic
4. Amber Glass
5. Widesmouth Glass
6. Other

Preservative Key:
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

Additional Analyses / Remarks:

With/hold Time: Yes No
pH Check: OK NA
Res. Cl₂ Check: Yes No NA
Sample Labels and COC Agree: Yes No NA
COC not present: Yes No

STL Chicago

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249602

Client: John

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
-1	OXP	<i>Samuel...</i>	<i>Samuel...</i>	11/18/06	1021	
-1	EXP	<i>Samuel...</i>	<i>Samuel...</i>	11/18/06	1045	
-1	Metals	<i>Samuel...</i>	<i>Samuel...</i>	11/20/06	035	
1	metals	<i>Samuel...</i>	<i>Samuel...</i>	11/20/06	1135	

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249602

Client: SMP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	Aluminum ICP	David Perkins T.C. Orr	T. Orr Jan 5-19+	11/20/06 11/21/02	16:50	

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 249602	Location.: 57222	Check List Number.: 1	Description.:	Date of the Report...: 11/21/2006
Customer Job ID.....:		Job Check List Date.: 11/17/2006		Project Manager.....: rcw
Project Number.: 20005627	Project Description.: JOAAP: LAP			
Customer.....: MWH Americas, Inc.		Contact.: Brigid Brooks		

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.2
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between CDC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

SEVERN
TRENT
STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

OC: 1129 DL

Report To:

Bill To: CAVE

Shaded Areas For Internal Use Only

Contact: S. Boylston / B. Brooks
Company: MMH
Address: 4015 STEW OFFICE
Phone: 615-423-6841
Fax: _____
E-Mail: _____

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____
Quote: _____

Sampler Name: Dylan Youse
Signature: [Signature]
Project Name: LAP SOILS
Project Number: _____

Project Location: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	Ref: Cont	Volume	Protex	Other								
1		JPM12 - AP 69 (1)	11/29	1040	S	G												
2	*	AP 72 (1)		1055														
3		AF 10 (2)		1100														
4		AF 11 (2)		1105														

Lab Lot# 299674
 Packing Sealed
 Sample Sealed
 Not used on lot
 Sample Intact
 Temperature & Cooler
 Within Hold Time
 Preserv. Indicators
 OK Check OK
 Res. Cl. Check OK
 Sample Labels and COC Agree
 COC not present
 Additional Analyses / Remarks

REINQUISHED BY: [Signature] COMPANY: _____
 RECEIVED BY: [Signature] COMPANY: _____
 DATE: 11/29/06 TIME: 1040
 DATE: _____ TIME: _____

DATE RECEIVED: 11/29/06 TIME: 1040
 DATE: _____ TIME: _____

- Matrix Key**
 WM = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
- Container Key**
 1. Paste
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widenexth Glass
 6. Other
- Preservative Key**
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

RECEIVED BY: _____
 RECEIVED BY: _____
 DATE: _____ TIME: _____

DATE RECEIVED: 11/29/06 TIME: 1040
 DATE: _____ TIME: _____

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249674

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
F-4	metals	<i>Jeff Davis</i>	<i>Jo Joaap</i>	11/20/06	1020	
F-4	metals	<i>Jo Joaap</i>	<i>Jeff Davis</i>	11/20/06	1250	

Job Number.: 249674 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 11/29/2006 Date of the Report...: 12/05/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcv
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?.. Y
 Custody seal on shipping container?..... N
 ...If "yes", custody seal intact?.....
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.4
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?.. N
 Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: JANE
Contact: S. Rosy Ppl | B. Brooks
Company: MWH
Address: JOHN FIENE OFFICE
Phone: 615-423-6641
Fax: _____
E-mail: _____

Bill To: JANE
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
POB: _____
Quote: _____

Sampler Name: Ryan Jones
Signature: [Signature]
Project Name: LAP STILLS
Project Number: _____

Project Location: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Laboratory ID	M & MSD	Client Sample ID	Sampling Date	Matrix	Comp/Grab	Matrix		Pb	TCLP	TOTAL Pb
						#/Cont.	Volume			
1		JPM12-AP76(G)	12/5	S	G	X	X	X		
2		AP78(G)	11/55			X				
3		AP79(G)	12/00			X				
4		AP81(G)	12/10			X				
5	X	AP82(G)	12/5	↓	↓	X	X	X		
6		JPM12-AP83(G)	13/00	S	G	X	X	X		

Lab Lot# 24973

Package Sealed (Yes) No	Samples Sealed Yes (NO)
Received on time (Yes) No	Samples Intact (Yes) No
Temperature, C. of Cooler <u>3.8</u>	
Within Hold Time (Yes) No	Preserv. Indicated Yes No (NA)
pH Check OK Yes No (NA)	Res. Gp. Check OK Yes No (NA)
Sample Labels and COD Agree (Yes) No	COD not present

Additional Analyses / Remarks
2 DAY TAT
WDO: 023
BOA: 4B1B

RELINQUISHED BY SC COMPANY MWH DATE 12/31/06 TIME 1630
RECEIVED BY [Signature] DATE _____ TIME _____
COMPANY _____ COMPANY _____

RECEIVED BY [Signature] DATE 12/5/06 TIME 1630
COMPANY STL COMPANY _____

- Matrix Key:
- SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - W = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - DL = Oil
 - A = Air

- Container Key:
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wadsworth Glass
 6. Other

- Preservative Key:
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS:

Date Received _____
Counter STL Hand Delivered _____
Bil of Lading _____

SIL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249713

Client: JOMAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
14-6	digestion ICP	Via Riddle T. G. ...	T. G. ... As 5-17-12	12/6/06 12/2/02	1400 15:00	
14-6	ICP					

STL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249743

Client: 3014AF

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-6	digestion to ITC	J. Peelle T. S. 2/4	T. S. 2/4 R. S. 1/97	12/1/06	13:45	

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249243

Client:

SOAPP - LAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
	Metals Prod	<i>Justin J. Mack</i>	<i>Paul J. Kelley</i>	12/6/06	0750	

rpjsckl	Job Sample Receipt Checklist Report		V2
Job Number.: 249743	Location.: 57222	Check List Number.: 1	Description.: Date of the Report.: 12/07/2006
Customer Job ID.....:	Job Check List Date.: 12/05/2006		Project Manager.....: rcw
Project Number.: 20005627	Project Description.: JOAAP: LAP		Contact.: Brigid Brooks
Customer.....: MWH Americas, Inc.			
Questions ?	(Y/N) Comments		
Chain-of-Custody Present?.....	Y		
Were samples dropped off at or picked up by STL?..	Y		
Custody seal on shipping container?.....	Y		
...If "yes", custody seal intact?.....	Y		
Custody seals on sample containers?.....	N		
...If "yes", custody seal intact?.....			
Samples iced?.....	Y		
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	3.8	
Samples received intact (good condition)?.....	Y		
Volatile samples acceptable? (no headspace).....			
Correct containers used?.....	Y		
Adequate sample volume provided?.....	Y		
Samples preserved correctly?.....	Y		
Samples received within holding-time?.....	Y		
Agreement between COC and sample labels?.....	Y		
Radioactivity at or below background levels?.....	Y		
A Sample Discrepancy Report (SDR) was needed?.....	N		
Residual Chlorine Check Required?			
If samples were shipped was there an air bill #?..			
Sample Custodian Signature/Date.....	Y		

SEVERN
TRENT

STL

STL Chicago C/C: 126685 A

2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. Pasypala / B. Brooks

Bill To: SAME

Contact: S. Pasypala / B. Brooks
Company: MWA
Address: 101 WEST AVENUE WHEELERS
Phone: 615-428-6841
Fax: _____
E-Mail: _____

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____
Quote: _____

Sampler Name: Elyan Youssef
Signature: [Signature]
Project Name: CAF SOIL
Project Number: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Project Location: _____
Lab P/N: _____

Laboratory ID	Client Sample ID	Sampling Date	Matrix	Comp/Grab	#/Cont	Volume	Preserv	Received on Ice	Temp	Within Hold Time	pH Check OK	Res. Dil. Check OK	COC not present	Additional Analyses / Remarks
	JPM4-AP3(C)	12/6 1450	S	G	X					Yes	No	NA	NA	2 DAY TAG
	AF1(C)	1500			X					Yes	No	NA	NA	WD: B23
	AF2(C)	1508			X					Yes	No	NA	NA	
	AF3(C)	1510			X					Yes	No	NA	NA	BDA: 4016

RELIQUISHED BY: [Signature] COMPANY: MWA DATE: 12/6/06 TIME: 16:36
RECEIVED BY: [Signature] COMPANY: STL DATE: 12/6/06 TIME: 17:00
RELIQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____
RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

Matrix Key: W/W = Wastewater, W = Water, S = Sol, SL = Sludge, MS = Miscellaneous, OL = Oil, A = Air.
SE = Sediment, SO = Soil, DS = Drum Solid, DL = Drum Liquid, L = Leachate, WI = Wipe.
Container Key: 1. Paste, 2. WDA Vial, 3. Sterile Plastic, 4. Amber Glass, 5. Wadsworth Glass, 6. Other.
Preservative Key: 1. HCl, Cool to 4°, 2. H2SO4, Cool to 4°, 3. HNO3, Cool to 4°, 4. NaOH, Cool to 4°, 5. NaOH/Zn, Cool to 4°, 6. Cool to 4°, 7. None.

Date Received: _____
Counter: STL
Bill of Lading: _____
Hand Delivered: [Signature]

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249954

Client: [Signature]

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-4	9/501:ds	[Signature]	[Signature]	12/7/06	0900	
1-4	9/501:ds	[Signature]	[Signature]	12/7/06	1550	

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249754 Client: JOHAR

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
2-4	disposition ICE	Joa Peelle T. Gan	T. Gan K5-199	12/9/16 12/9/16	14:00 07:20	

Job Number.: 249754 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 12/06/2006 Date of the Report.: 12/08/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	Y	
...If "yes", custody seal intact?.....	Y	
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2). Y		5.3
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between CDC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..		
Sample Custodian Signature/Date.....	Y	

Report To:

Bill To: STME

Shaded Areas For Internal Use Only

SEVERN
TRENT

STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Contact: Paul B. Poppers
Company: SWT
Address: Boyer Ave
Phone: 512 2681
Fac: _____
E-mail: _____

Contact: _____
Company: _____
Address: _____
Phone: _____
Fac: _____
PO#: _____
Quote: _____

Supplier Name: Ryan Young
Project Name: LAE Site
Project Location: _____
Project Number: _____

Lab P/N: _____
Date Acquired: _____
Hand Copy: _____

Laboratory ID: MS-MS
Client Sample ID: _____

Date: 12-7-14
Time: 1400

Matrix	Volume	Comp/Grab	Notes
<u>WF</u>	<u>6</u>	<u>LEAD</u>	<u>8330</u>

Lab P/N	Date	Time	Matrix	Volume	Comp/Grab	Notes
	<u>12-7</u>	<u>1400</u>	<u>WF</u>	<u>6</u>	<u>LEAD</u>	<u>8330</u>

RECEIVED BY: [Signature] DATE: 12/7/14 TIME: 1545
COMPANY: [Signature]

RECEIVED BY: [Signature] DATE: 12/7/14 TIME: 1600
COMPANY: [Signature]

Matrix Key:
WV - Wastewater
W - Water
S - Soil
SL - Sludge
MS - Miscellaneous
OL - Oil
A - Air

Container Key:
1. Plastic
2. VOA Vial
3. Sample Bottle
4. Analyser Glass
5. W/Deposition Glass
6. Other

Preservative Key:
1. HCl Cool to 4°
2. H2SO4 Cool to 4°
3. HNO3 Cool to 4°
4. NaOH Cool to 4°
5. NaOH/Zn Cool to 4°
6. Cool to 4°
7. None

Lab Lot# 249776
Packaging Sealed: Yes
Refrigeration: Yes
Temperature: _____ of Cooler

Additional Analyses / Remarks:
2 DAY FAT
NO: 023
BDA: 4016

DATE: 12/7/14 TIME: 1600
DATE: 12/7/14 TIME: 1600

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249776

Client: JOPAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	8330	<i>[Signature]</i>	<i>[Signature]</i>	12/21/06	1800	
1	8330	<i>[Signature]</i>	<i>[Signature]</i>	12/21/06	630	
1	-metallic metals	<i>[Signature]</i>	<i>[Signature]</i>	12/18/06	720	
1	metals	<i>[Signature]</i>	<i>[Signature]</i>	12/18/06	1115	

SIL Unicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249776

Client: JAHAF

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	Digestion to ICP ICP	Dan Peltier R. G. Lee	T. G. Lee R. G. Lee	12/8/06 12/11/06	1400 1500	

Job Number.: 249776 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 12/07/2006 Date of the Report...: 12/11/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2)..	Y	4.3
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check, Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

**SEVERN
TRENT**

STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

COG 120776L

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: S. COSYPA | B. BLOSKS
 Company: MWH
 Address: DRIVER FLEVO DRIVE
 Phone: 815-422-6841
 Fax: _____
 Email: _____

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____
 Quote: _____

Lab Lot# 249777
 Package Sealed: Yes No
 Refrigerant on Ice: Yes No
 Temperature: C of Cooler 4.3
 Wipe Hold Time: Yes No
 pH Check: OK NA
 Sample Labels and COC Agree: Yes No
 Res. Cl. Check: OK NA
 COC not present: Yes No
 Samples Sealed: Yes No
 Samples Intact: Yes No

Sampler Name: RYAN BOUNS
 Project Name: LRF SDLS
 Project Location: _____
 Date Required: _____
 Hard Copy: _____
 Fax: _____

Signature: [Signature]
 Project Number: _____

Laboratory ID	MSD	Client Sample ID	Date	Time	Matrix		Refr. #	#/Cont.	Volume	Preserv.
					Comp	Grab				
1		JPM4-AP4(C)	12/7	1200	S	G				
2		AP5(C)		1205						
3	X	AP6(C)		1210						
4		AP7(L)		1215						
5		AP8(C)		1220						
6		AP9(C)		1225						
7		AP10(C)		1230						
8	X	AF4(C)		1235						
9		AF5(C)		1240						
10		AF6(C)		1245						
11		AP1(C)	12/6	1430						

Additional Analyses / Remarks
2 Day TAT
WD: 023
BDA: 4016

REINQUISHED BY: [Signature]
 COMPANY: MWH
 DATE: 12/7/06
 TIME: 1545

RECEIVED BY: [Signature]
 COMPANY: [Signature]
 DATE: _____
 TIME: _____

DATE RECEIVED: 12/7/06
 TIME: 1600

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air

Container Key
 1. Paste
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wadsworth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS:

Date Received: 12/2/06
 Courier: SR Hand Delivered
 Bill of Lading:

STL Chicago

Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249-777

Client: SOAR

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-11	metals	<i>E. Peck</i>	<i>J. Peck</i>	12/8/06	720	
1-11	metals	<i>J. Peck</i>	<i>E. Peck</i>	12/8/06	1115	

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249777

Client: 584AP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-11	digestion TP	Jim Reelke	T. CA	12/11/06	10:00	
1-11	ICP	T. San	Am 5-170	12/11/06	15:00	

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249777

Client: BRMP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-11	Digestion BP IP	Jessie Peltke T. Sasser	T. Sasser Ann 51172	12/8/06	1400	
1-11						

rpjsckl	Job Sample Receipt Checklist Report	V2
Job Number.: 249777	Location.: 57222	Check List Number.: 1
Customer Job ID.....:		Description.:
Project Number.: 20005627	Project Description.: JOAAP: LAP	Date of the Report...: 12/11/2006
Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks	Project Manager.....: rcw
Questions ?	(Y/N) Comments	
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.3
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

SEVERN TRENT
STI

STI Chicago 602-121800
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. Rosypal / R. Brooks
Contact: MULL
Company: FORUM FIELD SERVICES
Address: 615-423-6041
Phone: 615-423-6041
Fax: 615-423-6041
E-Mail:

Bill To: LAW
Contact:
Company:
Address:
Phone:
Fax:
E-Mail:

Sampler Name: Ryan Upnic
Project Name: LAP SOIL
Project Location:
Date Required:
Hard Copy:
Fax:

Signature: [Signature]
Project Number:
Matrix:
Comp/Grab:
Additional Analytes / Remarks:

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	Additional Analytes / Remarks
		JPM12-AP 84(C)	12/18	1400	S	G	2 DAY TAR
		AP 85(C)	12/18	1405	S	G	WD: V23
							BOA: 4016

REINQUISHED BY: [Signature] COMPANY: WWD DATE: 12/18 TIME: 1500
RECEIVED BY: [Signature] COMPANY: SR DATE: 12/18/06 TIME: 1600

COMMENTS:
Date Received:
Carrier: SR Hand Delivered: X
Bill of Lading:

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - DL = Oil
 - A = Air

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widenough Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

STL Chicago Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249895

Client: SOAPP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1,2	TELP	[Signature]	[Signature]	12/18/06	1550	
1,2	TELP	[Signature]	[Signature]	12/18/06	1730	

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249895

Client: IBAA

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
002 2	digestion to ICP ICP	David Buehler TS On	TS On R5-19+	11/21/06 12/2/06	15:00 16:00	

**SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record**

Job No: 249 895

Client: JDAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1.2	Digestion to TLP	Jim Perkins	T. Smith	12/19/06	15:00	
1.2	TLP	T. Smith	East-197	12/24/08	10:30	

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249895

Client: JDA

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
2	Dig → ICP	T. Carlin	T. S. Carlin	12/19/02	20:30	
2	ICP	T. Carlin	RMS-132	12/21/08	09:00	

Job Number.: 249895 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 12/18/2006 Date of the Report...: 12/26/2006
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?.. Y
 Custody seal on shipping container?..... Y
 ...If "yes", custody seal intact?..... Y
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 5.3
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?..
 Sample Custodian Signature/Date..... Y

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STL

STL Chicago
2417 Bond Street
University Park, IL 60465
Phone: 708-594-5200
Fax: 708-594-5211
C.O. 122706 A

Report To:
Contact: S. Rosypal / B. Brooks
Company: MWH Field Office
Address: _____
Phone: 815-423-6841
Fax: Suzanne.Rosypal@
E-Mail: mwhglobal.com

Bill To:
Contact: Same
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____
Quote: _____

Shaded Areas For Internal Use Only 1 of 1
Lab Lot# 249944
Prep. Status: Sampled
Rep. Analyzed: Sampled
Comparative: Control
MUNICIPALITY: _____
COUNTY: _____
STATE: _____
ZIP: _____
Additional Analyses / Remarks

Sampler Name: Jared S. Churchill
Signature: [Signature]
Project Name: LAP Soils
Project Number: _____

Project: WINDMILL
Lab P#: DICK VADGHT
Date Required: _____
Hard Copy: _____
Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Date	Sampling Time	Matrix	Comp/Grab	8330	PAH	Total Pb	Arsenic	Cadmium	Copper
1		JPM3-ITF AP98 (1)	12/21/06	1315	S	G	✓	✓	✓			
2		AP99 (1)		1320	S	G	✓	✓	✓			
3		AE249 (3)		1325	S	G	✓	✓	✓			
4		AF 250 (3)		1330	S	G	✓	✓	✓			
5		AF 251 (3)		1335	S	G	✓	✓	✓			
6		AF 252 (3)		1340	S	G	✓	✓	✓			
7		AF 253 (3)		1345	S	G	✓	✓	✓			
8		AF 254 (3)		1350	S	G	✓	✓	✓			

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 12/27/06 TIME: 1500
RECEIVED BY: [Signature] COMPANY: STL DATE: 12/27/06 TIME: 1450

Matrix Key:
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air

SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WV = Wipe
0 =

Container Key:
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Viskemouth Glass
6. Other

Preservative Key:
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. More

COMMENTS: Follow LCG

Date Received: 12/27/06 Hand Delivered: [Signature]
Counter: 52 Bill of Lading: _____

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249944

Client: JORR P

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-8	CRQ CRQ	ASA	ASJ 0000A	11/18/16	07:20	
1-8	CRQ	ASJ 1000A	ASJ 1000A	11/18/16	08:20	
		Metals analyzed up to 5/1/17 JMM				

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249944

Client: CDAAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-8	Digestion to ICP	Jina Poobles	T. GSN	12/28/01	1400	
1-8	ICP	T. GSN	Ann S. 195	1/4/02	10:00	

Job Number.: 249944	Location.: 57222	Check List Number.: 1	Description.:	
Customer Job ID.....:	Job Check List Date.: 12/27/2006	Date of the Report...: 12/28/2006		
Project Number.: 20005627	Project Description.: JOAAP: LAP	Project Manager.....: rcw		
Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks			

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2)..	Y	4.6
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between CDC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

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STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. Rosypal / B. Brooks
Company: MUDH Field Office
Address: _____
Phone: 815-403-6841
Fax: Suzanne.Rosypal@
E-Mail: mudhpal.com

Bill To: Sam
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____
Quote: _____

Shaded Areas For Internal Use Only
Lab Lot# 249945
Date Received 12/27/06
Counter: 572
Hand Delivered
Bill of Lading

Project Name:	Signature:	Date Required	Hard Copy:	Fac:	Matrix	Comp/Grab	Additional Analyses / Remarks
1 AP Soils	<i>[Signature]</i>						Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Project: <u>AP Soils</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Lab: <u>MS-MSD</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Client Sample ID: <u>MS-MSD</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Sampling Date: <u>12/27/06</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Time: <u>1400</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Matrix: <u>S C</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Comp/Grab: <u>Pb TCLP</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Relinquished by: <u>[Signature]</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Relinquished by: <u>[Signature]</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Company: <u>Mudh</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
Company: <u>Mudh</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
DATE: <u>12/27/06</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
DATE: <u>12/27/06</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
TIME: <u>1500</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
TIME: <u>1500</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
RECEIVED BY: <u>[Signature]</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
RECEIVED BY: <u>[Signature]</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
DATE: <u>12/27/06</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
DATE: <u>12/27/06</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
TIME: <u>1500</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
TIME: <u>1500</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
COMMENTS: <u>Follows LCG</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
COMMENTS: <u>Follows LCG</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
DATE RECEIVED: <u>12/27/06</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
DATE RECEIVED: <u>12/27/06</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
COUNTER: <u>572</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
COUNTER: <u>572</u>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
HAND DELIVERED: <input checked="" type="checkbox"/>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
HAND DELIVERED: <input checked="" type="checkbox"/>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
BILL OF LADING: <input type="checkbox"/>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
BILL OF LADING: <input type="checkbox"/>							Weight Field Sample <input type="checkbox"/> Single sealed and analyzed <input type="checkbox"/> Subsample OK <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>

Matrix Key
SE = Sediment
SO = Solid
DS = DRAIN Solid
DL = Drain Liquid
L = Leachate
WM = Waste
O = Other

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Wadsworth Glass
6. Other

Preservative Key
1. HCl Cool to 4°
2. H2SO4 Cool to 4°
3. HNO3 Cool to 4°
4. NaOH Cool to 4°
5. NaOH/Zn Cool to 4°
6. Cool to 4°
7. None

STL Chicago

Job Number.: 249945 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 12/27/2006 Date of the Report...: 12/28/2006
 Project Number.: 20004905 Project Description.: JOAAP: Debris Sampling Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.6
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

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STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. POSYPAH / B. BLESKIS
Contact: MWV
Company: JULIA FINE SERVICES
Address: _____
Phone: 815-473-6844
Fax: _____
E-Mail: _____

Bill To: SAFE
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____
Quote: _____

Sampler Name: KYAN YBANK
Signature: [Signature]
Project Name: LAP SDILS
Project Number: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Lab ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab												
		JPL5-A1 (A)	12/07	1005	S	C	TOTAL	Pb	PCB									
		A2 (A)	1005															
		A3 (A)	1015															
		A4 (A)	1015															
		A5 (A)	1020															
		B1 (A)	1025															
		B2 (A)	1030															
		B3 (A)	1035															
		B4 (A)	1040															
		B5 (A)	1045															

RELINQUISHED BY: [Signature] COMPANY: MWV DATE: 12-07 TIME: 1500
RECEIVED BY: [Signature] COMPANY: STL DATE: 1/16/07 TIME: 1600
RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____
RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widenouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

Additional Analyses / Remarks

2 DAY TAT

UB: 023

BD: 4012

Lab Lot# 249966

Package Sealed: No Yes

Sample Sealed: No Yes

Refrigerated: No Yes

Sample Intact: No Yes

Wet/Dry: No Yes

Residual: No Yes

Checkbook: No Yes

Res. Generation: No Yes

Sample Labels and QC: No Yes

QC: No Yes

Date Received: _____

Hand Delivered:

Bill of Lading: _____

STL Chicago is a part of Severn Trent Laboratories, Inc.

STL8208 1000

STL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249966

Client: SOHAI

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-10	ORG	JST	JST	01/03/07	07:30	
1-10	Metal's	JST	JST	1/3/07	8:45	
1-10	ORG	JST	JST	01/03/07	8:45	
1-10	Metal's	JST	JST	1/3/07	11:45	

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249966

Client: SOANA

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-10	digestion for ICP	Dia Pookle T. Con	T. Con Am 5/2/11	11/3/07 11/4/07	15:00 08:00	

Job Number.: 249966 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 01/02/2007 Date of the Report.: 01/04/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?.. Y
 Custody seal on shipping container?..... Y
 ...If "yes", custody seal intact?..... Y
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?..
 Sample Custodian Signature/Date..... Y

**SEVERN
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STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

COE: P10307

Report To:

Bill To: **SAVUE**

Shaded Areas For Internal Use Only

Contact: **S. Kosygal / R. Brooks**
 Company: **HWPL**
 Address: **401 N. FINE OFFICE**
 Phone: **815-423-6541**
 Fax: _____
 E-mail: _____

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____
 Quote: _____

Sampler Name: **Edgar Powell**
 Project Name: **LAR SOILS**
 Signature: *[Signature]*
 Project Manager: _____

Project Locations: _____
 Date Required: _____
 Hard Copy: _____
 Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	P ₅ TCLP	Total Pb	PCB	Particulates		Metals		Additional Analyses / Remarks
										Volume	Residual	As	Cadmium	
1		JPLS-C1 (1)	1/3/07	1000	S	C			X					2 DAY TAT
2		C2 (1)		1020					X					M.D: 023
3		C3 (1)		1040					X					BDA: 4D16
4		C4 (1)		1160			X		X					
5		C5 (1)		1120					X					
6		D1 (1)		1140					X					
7		D2 (1)		1200					X					
8		D3 (1)		1220					X					
9		D4 (1)		1240				X	X					
10		D5 (1)		1300					X					

RELINQUISHED BY: **Sharon** COMPANY: **HWPL** DATE: **1/3/07** TIME: **1600**
 RECEIVED BY: **[Signature]** COMPANY: **STL** DATE: **1/3/07** TIME: **1547**
 COMMENTS: **[Signature]** DATE: **1/2/07** TIME: **1035**

Matrix Key: WY = Wastewater, W = Water, S = Soil, SL = Sludge, MS = Miscellaneous, OL = Oil, A = Air
 SE = Sediment, SQ = Solid, DS = Drain Solid, DL = Drum Liquid, L = Leachate, WI = Wipe, O = _____
 Container Key: 1. Plastic, 2. WOA Vial, 3. Sterile Plastic, 4. Amber Glass, 5. Wadsworth Glass, 6. Other
 Preservative Key: 1. HCl, Cool to 4°, 2. H2SO4, Cool to 4°, 3. HNO3, Cool to 4°, 4. NaOH, Cool to 4°, 5. NaOH/Zn, Cool to 4°, 6. Cool to 4°, 7. None
 Date Received: _____ Counter: _____ Bill of Lading: _____ Hand Delivered: _____

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249972

Client: FOIA

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-10	extractions (3 S/L)	Foley Hunt	JOS	1/3/07	1700	
1-10	extractions	JOS	Foley Hunt	1/3/07	2200	
1-10	metals	JOS	Sam Parks	1/4/07	815	
1-10	metals	Sam Parks	Sam Parks	1/9/07	1045	

SIL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249 Q72

Client: DBP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
9	digestion for ITP	Dave Poelke T. Coen	L. Coen Rm 5-A2	1/4/07	1500	
9				1/5/07	28:00	

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249972

Client: SNAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
4	Airgun to ICP	Don Parker TIC	TIC Kurt	11/5/07 11/2/07	1500 09:00	

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 249972 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 01/03/2007 Date of the Report.: 01/10/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?	(Y/N)	Comments
-------------	-------	----------

Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	Y	
...If "yes", custody seal intact?.....	Y	
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.0
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..		
Sample Custodian Signature/Date.....	Y	

SEVERN
TRINITY
STL

STL Chicago
2417 Bond Street
University Park, IL 60465
Phone: 708-534-3200
Fax: 708-534-3211
c/o: 122706 A

Report To:
Contact: S. Rosupol / B. Brooks
Company: MUDH Field Office
Address: _____
Phone: 815-423-6841
Fax: Suzanne Rosupol
E-Mail: mush@ohb.com

Bill To:
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
Quote: _____

Spilled Areas for Internal Use Only
249973 / 1 of 1
Lab Lot# 249944-2

Project Name:	Signature:	Date Required	Hard Copy:	Fax:	Sampling Date, Time	Matrix	Comp/Grab	8330	PAH	Total Pb	Arsenic	Cadmium	Copper	Additional Analyses / Remarks
Project Name: LPP Soils	Signature: [Signature]	Date Required: [Blank]	Hard Copy: [Blank]	Fax: [Blank]	12/21/06 1315	JPM3-ITE AP98 (1)	5 G	✓	✓	✓	✓	✓	✓	JOAPP LPP
Project Name: [Blank]	Signature: [Blank]	Date Required: [Blank]	Hard Copy: [Blank]	Fax: [Blank]	1320	AP99 (1)	5 G	✓	✓	✓	✓	✓	✓	BOH4D16 WD 0023
Project Name: [Blank]	Signature: [Blank]	Date Required: [Blank]	Hard Copy: [Blank]	Fax: [Blank]	1325	AF249 (B)	5 G	✓	✓	✓	✓	✓	✓	
Project Name: [Blank]	Signature: [Blank]	Date Required: [Blank]	Hard Copy: [Blank]	Fax: [Blank]	1330	AF250 (S)	5 G	✓	✓	✓	✓	✓	✓	
Project Name: [Blank]	Signature: [Blank]	Date Required: [Blank]	Hard Copy: [Blank]	Fax: [Blank]	1335	AF251 (S)	5 G	✓	✓	✓	✓	✓	✓	
Project Name: [Blank]	Signature: [Blank]	Date Required: [Blank]	Hard Copy: [Blank]	Fax: [Blank]	1340	AF252 (S)	5 G	✓	✓	✓	✓	✓	✓	
Project Name: [Blank]	Signature: [Blank]	Date Required: [Blank]	Hard Copy: [Blank]	Fax: [Blank]	1345	AF253 (S)	5 G	✓	✓	✓	✓	✓	✓	
Project Name: [Blank]	Signature: [Blank]	Date Required: [Blank]	Hard Copy: [Blank]	Fax: [Blank]	1350	AF254 (S)	5 G	✓	✓	✓	✓	✓	✓	THI: 2 dug

Matrix Key
WN = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
PA = Oil
A = Air

Container Key
1. Plastic
2. VOA Vial
3. Stable Plastic
4. Amber Glass
5. Wadsworth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/2N, Cool to 4°
6. Cool to 4°
7. None

Comments
Follows CG

RELINQUISHED BY: [Signature]
COMPANY: MUDH
DATE: 12/27/06
TIME: 1450
RECEIVED BY: [Signature]
COMPANY: STL
DATE: 12/27/06
TIME: 1450

DATE RECEIVED: 12/27/06
HAND DELIVERED: [X]
BILL OF LADING: [Blank]

STL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249973

Client: Job # 1

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-4	metals	David Perkins	David Perkins	1/4/08	9:15	
1-4	metals			1/4/07	1045	

STL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249973

Client: DOHAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-4	Digestion to ICP	Dir. Poethke R. Siston	R. Siston	11/10/07	15:00 08:00	

Job Number.: 249973 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 01/04/2007 Date of the Report...: 01/10/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?	(Y/N) Comments
Chain-of-Custody Present?.....	Y relog
Were samples dropped off at or picked up by STL?..	
Custody seal on shipping container?.....	
...If "yes", custody seal intact?.....	
Custody seals on sample containers?.....	
...If "yes", custody seal intact?.....	
Samples iced?.....	
Temperature of cooler acceptable? (4 deg C +/- 2).	
Samples received intact (good condition)?.....	
Volatile samples acceptable? (no headspace).....	
Correct containers used?.....	
Adequate sample volume provided?.....	
Samples preserved correctly?.....	
Samples received within holding-time?.....	
Agreement between COC and sample labels?.....	
Radioactivity at or below background levels?.....	
A Sample Discrepancy Report (SDR) was needed?.....	
Residual Chlorine Check Required?	
If samples were shipped was there an air bill #?..	
Sample Custodian Signature/Date.....	

rpjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 249944	Location.: 57222	Check List Number.: 1	Description.:	Date of the Report...: 01/10/2007
Customer Job ID.....:		Job Check List Date.: 12/27/2006		Project Manager.....: rcw
Project Number.: 20005627	Project Description.: JOAAP: LAP			
Customer.....: MWH Americas, Inc.		Contact.: Brigid Brooks		
Questions ?	(Y/N) Comments			
Chain-of-Custody Present?.....	Y			
Were samples dropped off at or picked up by STL?..	Y			
Custody seal on shipping container?.....	N			
...If "yes", custody seal intact?.....				
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples iced?.....	Y			
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.6		
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....				
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Radioactivity at or below background levels?.....	Y			
A Sample Discrepancy Report (SDR) was needed?.....	N			
Residual Chlorine Check Required?				
If samples were shipped was there an air bill #?..	N			
Sample Custodian Signature/Date.....	Y			

SEVERN
TRENT
STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. S. ...
Contact: S. S. ...
Company: MWH
Address: FOLLET FIELD OFFICE

BB To: SAWE
Contact: _____
Company: _____
Address: _____

Phone: _____
Fax: 815-482-6844
E-Mail: _____

Phone: _____
Fax: _____
Quote: _____

Shaded Areas For Internal Use Only

Lab Lot# 249981

Package Sealed: Yes No

Received on Ice: Yes No

Temperature \leq of cooler: 44

Samples Sealed: Yes No

Samples Intact: Yes No

Wettable Hold Time: Yes No

Pressure Indicated: Yes No

PH Check OK: Yes No

Res. Cl. Check OK: Yes No

Sample Labels and CMC Agree: Yes No

CGC Not present: Yes No

Sampler Name: MANUHOUS
Project Name: LA SOILS
Project Location: _____
Date Required: _____
Hard Copy: Fax:

Matrix: PCB and TCP
Comp/Grab: _____

Additional Analyses / Remarks: _____

Lab PK#	Client Sample ID	Date	Time	Matrix	Comp/Grab	Remarks
1	JPLS - E1 (A)	11-4-07	1500	S	C	2 DAY TAT
2	E2 (A)		1020			
3	E3 (A)		1040			W.D. 023
4	E4 (A)		1100			BDA: 4616
5	E5 (A)		1120			
6	F1 (A)		1140			
7	F2 (A)		1200			
8	F3 (A)		1220			
9	F4 (A)		1240			
10	F5 (A)		1300			

RELINQUISHED BY: Despina COMPANY: MWH DATE: 11/4/06 TIME: 1620

RECEIVED BY: SA COMPANY: SA DATE: 11/4/07 TIME: 1620

- Matrix Key**
- SE = Sediment
 - SO = Solid
 - DS = Drum Sock
 - DL = Drum Liquid
 - L = Leachate
 - WT = Waste
 - 0 = Air
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Analyt. Glass
 5. Wadsworth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS: _____

Date Received: 11/4/07 Hand Delivered:

Bill of Lading: _____

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 299981

Client: SEAA

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-10	70 solids	<i>[Signature]</i>	<i>[Signature]</i>	1/8/07	08:00	
1-10	70 solids	<i>[Signature]</i>	<i>[Signature]</i>	1/8/07	10:20	



SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249981

Client: DPAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
4.5	Digestion to ICP	Jae Polke	T. Green 8/5/17	1/8/17	11:00	
4.5	ICP	T. Green		1/8/17	14:30	

Job Number.: 249981 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 01/04/2007 Date of the Report...: 01/10/2007
 Project Number.: 20005627 Project Description.: JDAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.4
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date:.....	Y	

SEVERN TRENT
STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

LOC: $\phi 10507$

Report To: S. Breyer / 418 Blecker
Company: MWH
Address: Jobber Field Office
Phone: 618-423-6841
Fax: _____
E-Mail: _____

Signature: [Signature]
Project Number: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Bill To: _____
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PG# _____
Quote: _____

Shaded Areas For Internal Use Only

Lab Lot# 249992
Package Sealed No Samples Sealed No
Repacked on Ice No Samples Intact No
Temperature °C of Cooler 43

Within Hold Time No Preserv. Indicated Yes
pH Check OK Res Cl₂ Check OK
Yes No NA Yes No NA
Sample Labels and COC Agree Yes COC not present No

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix		Preserv.	Additional Analyses / Remarks
					Comp	Grab		
1		JPL5-G1(C)	1/5/07	1100	S	C	X	2 DAY TRF
2		G2(C)		1120	X	X	X	WD: 023
3		G3(C)		1140	X	X	X	
4		G4(C)		1200	X	X	X	
5		G5(C)		1220	X	X	X	204: 4816
6		H1(C)		1240	X	X	X	
7		H2(C)		1300	X	X	X	
8		H3(C)		1300	X	X	X	
9		H4(C)		1340	X	X	X	
10		H5(C)		1400	X	X	X	

REQUISITIONED BY [Signature] COMPANY MWH DATE 1/5/07 TIME 1600
 RECEIVED BY [Signature] COMPANY STL DATE 1/5/07 TIME 1530

Matrix Key: WW = Wastewater, W = Water, S = Soil, SL = Sludge, MS = Miscellaneous, OL = Oil, A = Air

Container Key: 1. Plastic, 2. VOA Vial, 3. Sterile Plastic, 4. Amber Glass, 5. Widenmouth Glass, 6. Other

Preservative Key: 1. HCl, Cool to 4°, 2. H2SO4, Cool to 4°, 3. HNO3, Cool to 4°, 4. NaOH, Cool to 4°, 5. NaOH/Zn, Cool to 4°, 6. Cool to 4°, 7. None

COMMENTS: _____

Date Received: 1/5/07 Hand Delivered: Yes
 Bill of Lading: _____

STL Chicago Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 249992

Client: JOMP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-10	ORC	<i>[Signature]</i>	<i>[Signature]</i>	1/05/07	1700	
1-10	ORC	<i>[Signature]</i>	<i>[Signature]</i>	1/05/07	2200	
1-10	To Solids	<i>[Signature]</i>	<i>[Signature]</i>	1/8/07	08:00	
1-10	To Solids - Metals	<i>[Signature]</i>	<i>[Signature]</i>	1/8/07	09:50	
1-10	Metals	<i>[Signature]</i>	<i>[Signature]</i>	1/8/07	1250	

rpisckl

Job Sample Receipt Checklist Report

V2

Job Number.: 249992	Location.: 57222	Check List Number.: 1	Description.:	Date of the Report...: 01/08/2007
Customer Job ID.....:		Job Check List Date.: 01/05/2007		Project Manager.....: rcw
Project Number.: 20005627	Project Description.: JOAAP: LAP		Contact.: Brigid Brooks	
Customer.....: MWH Americas, Inc.				

Questions ?	(Y/N) Comments
-------------	----------------

Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).	Y	4.3
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between CDC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street (SC) #10207
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

BILL To: SAME

250003
Shaded Areas For Internal Use Only 1 of 1

Contact: S. ROSYPH/B Blocks
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: 815-423-6841
Fax:
E-Mail:

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Lab Lot# 249916

Packaging Sealed	Samples Sealed
Yes No	Yes No
Received on Ice	Samples Intact
Yes No	Yes No
Temperature °C of Cooler	
<u>43</u>	
Wash-Hold Time	Preserv. Indicated
Yes No	Yes No NA
Oil Check OK	Res Cl ₂ Check OK
Yes No NA	Yes No NA
Sample Labels and COC Agree	
Yes No	COC not present

Sampler Name: KYAN YOUNG
Signature: [Signature]
Project Name: LAP SOILS
Project Number:
Project Location:
Date Required:
Lab PM:
Hard Copy:
Fax:

Lab ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	TOTAL Pb	PCB	Vials	Preserv
			Date	Time						
1		JPLE-A1 (C)	1/2/07	1055	S	C	X	X		
2		A2 (C)		1055			X	X		
3		A3 (C)		1016			X	X		
4		A4 (C)		1015			X	X		
5		A5 (C)		1020			X	X		
6		B1 (C)		1025			X	X		
7		B2 (C)		1030			X	X		
8		B3 (C)		1035			X	X		
9		B4 (C)		1046			X	X		
10		B5 (C)		1045			X	X		

Additional Analyses / Remarks

2 DAY TEST

NO: 023

BDA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 1-2-07 TIME 1600

RECEIVED BY [Signature] COMPANY STL DATE 1/2/07 TIME 1600

Matrix Key

WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air

SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
W = Waste
O = Other

Container Key

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Wide-mouth Glass
6. Other

Preservative Key

1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received 1 1

Courier: Hand Delivered

Bill of Lading

**SEVERN
TRENT
STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

COC: P10307

Report To:

Contact: S. Roybal R. Brooks
Company: MWH
Address: 101st Field Office
Phone: 815-423-6811
Fax:
E-Mail:

Bill To: SAME

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

250003

Shaded Areas For Internal Use Only

Lab Lot# 249972

Facilities Sealed Yes No	Samples Sealed Yes No
Handled on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler <u>4.0</u>	
Waters Held Three Yes No	Preserv. Indicated Yes No
pH Check OK Yes No	Res Cl ₂ Check OK Yes No
Sample Labels and COC Agree Yes No	COC not present

Sampler Name: Peter York Signature: [Signature]

Project Name: LAR SOILS Project Number: _____

Project Location: _____ Date Required: _____

Lab P#: _____ Hard Copy: _____ Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PB	TCLP	TOTAL Pb	PCB	Additional Analyses / Remarks
			Date	Time							
1		JPLS-C1 (1)	1-3-07	1000	S	C				X	Z DAY TRF
2		C2 (1)		1020						X	
3		C3 (1)		1040						X	WD: 023
4		C4 (1)		1100			X			X	
5		C5 (1)		1120						X	BDA: 4016
6		D1 (1)		1140						X	
7		D2 (1)		1200						X	
8		D3 (1)		1220						X	
9		D4 (1)		1240				X		X	
10		D5 (1)		1300						X	

RELINQUISHED BY <u>[Signature]</u> COMPANY <u>MWH</u> DATE <u>1/3/07</u> TIME <u>1600</u>	RECEIVED BY <u>[Signature]</u> COMPANY <u>STL</u> DATE <u>1/3/07</u> TIME <u>1547</u>
RELINQUISHED BY <u>[Signature]</u> COMPANY <u>MWH</u> DATE <u>1/3/07</u> TIME <u>1600</u>	RECEIVED BY <u>[Signature]</u> COMPANY <u>STL</u> DATE <u>1/3/07</u> TIME <u>1635</u>

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soli
 - SL = Sludge
 - MS = Miscellaneous
 - CL = C
 - A = Air
 - SE = Sediment
 - SC = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - W = Wipe
 - G =
- Container Key**
1. Plastic
 2. YOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: _____

Courier: _____ Hand Delivered

Bill of Lading

Job Sample Receipt Checklist Report

rpjsckl

Job Number.: 249966 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 01/02/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MUH Americas, Inc. Contact.: Brigid Brooks
 Date of the Report...: 01/19/2007
 Project Manager.....: rcw

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?.. Y		
Custody seal on shipping container?.....	Y	
...If "yes", custody seal intact?.....	Y	
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3		
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..		
Sample Custodian Signature/Date.....	Y	

Job Number.: 249972 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 01/03/2007 Date of the Report...: 01/19/2007
 Project Number.: 20005627 Project Description.: JDAAP: LAP Project Manager.....: rcm
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?	(Y/N) Comments
Chain-of-Custody Present?.....	Y
Were samples dropped off at or picked up by STL?... Y	
Custody seal on shipping container?..... Y	
...If "yes", custody seal intact?..... Y	
Custody seals on sample containers?..... N	
...If "yes", custody seal intact?.....	
Samples iced?..... Y	
Temperature of cooler acceptable? (4 deg C +/- Z). Y 4.0	
Samples received intact (good condition)?..... Y	
Volatile samples acceptable? (no headspace).....	
Correct containers used?..... Y	
Adequate sample volume provided?..... Y	
Samples preserved correctly?..... Y	
Samples received within holding-time?..... Y	
Agreement between CDC and sample labels?..... Y	
Radioactivity at or below background levels?..... Y	
A Sample Discrepancy Report (SDR) was needed?..... N	
Residual Chlorine Check Required?	
If samples were shipped was there an air bill #?..	
Sample Custodian Signature/Date..... Y	

Job No: 250003

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1.2	digestion to ICP	Dora Peabody	T. Cal	2/10/07	1500	
1.2	ICP	T. Cal	Ans J-177	1/22/07	09:00	

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Contact: B.S. PONYIA | P. BROOKS
 Company: MWH
 Address: SOLWATER FIELD OFFICE
 Phone: 615-423-6841
 Fax: _____
 E-Mail: _____

Lab Lot# 279250585

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. Indicated Yes No <u>NA</u>
pH Check OK Yes No <u>NA</u>	Ras Cl. Check OK Yes No <u>NA</u>
Sample Labels and COC Agree Yes No <u>COC not present</u>	

Sampler Name: Ryan Young Signature: [Signature]
 Project Name: LAP SOIL Project Number: _____
 Project Location: _____ Date Required: _____
 Lab PM: _____ Hard Copy: _____
 Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCB	Preservative													
			Date	Time				1	2	3	4	5	6	7	8	9	10				
1		JPLS-I1 (L)	1-8-07	1000	S	G	X														
2		I2 (L)		1020			X														
3		I3 (L)		1040			X														
4		I4 (L)		1100			X														
5		I5 (L)		1120			X														
6		J1 (L)		1140			X														
7		J2 (L)		1200			X														
8		J3 (L)		1220			X														
9		J4 (L)		1240			X														
10		J5 (L)		1300			X														

Additional Analyses / Remarks

2 DAY JAF

WD: 023

RNA: 4816

RELINQUISHED BY: [Signature] COMPANY MWH DATE 1/8/07 TIME 1600
 RECEIVED BY: [Signature] COMPANY STL DATE 1/8/07 TIME 1600

RELINQUISHED BY: _____ COMPANY _____ DATE _____ TIME _____
 RECEIVED BY: [Signature] COMPANY STL DATE 1/8/07 TIME 1645

COMMENTS: _____

Date Received: _____

Courier: STL Hand Delivered [Signature]

Bill of Lading: _____

STL Chicago

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Sol
 - Sl = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Liquid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

Job No:

250005

Client:

JOHN

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
L-10	g	<i>[Signature]</i>	<i>[Signature]</i>	01/09/07	0755	
L-10	EXTRACTIONS	<i>[Signature]</i>	<i>[Signature]</i>	01/09/07	0925	
L-10	% Solids	<i>[Signature]</i>	Paul F. Kolmpf	01/09/07	1410	
L-10	% Solids	Paul F. Kolmpf	<i>[Signature]</i>	01/09/07	1430	

rpjsckt	Job Sample Receipt Checklist Report		VZ
Job Number.: 250005	Location.: 57222	Check List Number.: 1	Description.: Date of the Report.: 01/10/2007
Customer Job ID.....:		Job Check List Date.: 01/08/2007	Project Manager.....: rcw
Project Number.: 20005627	Project Description.: JOAAP: LAP	Contact.: Brigid Brooks	
Customer.....: MWH Americas, Inc.			
Questions ?	(Y/N) Comments		
Chain-of-Custody Present?.....	Y		
Were samples dropped off at or picked up by STL?..	Y		
Custody seal on shipping container?.....	Y		
...If "yes", custody seal intact?.....	Y		
Custody seals on sample containers?.....	N		
...If "yes", custody seal intact?.....			
Samples iced?.....	Y		
Temperature of cooler acceptable? (4 deg C +/- 2). Y	4.0		
Samples received intact (good condition)?.....	Y		
Volatile samples acceptable? (no headspace).....			
Correct containers used?.....	Y		
Adquate sample volume provided?.....	Y		
Samples preserved correctly?.....	Y		
Samples received within holding-time?.....	Y		
Agreement between COC and sample labels?.....	Y		
Radioactivity at or below background levels?.....	Y		
A Sample Discrepancy Report (SDR) was needed?.....	N		
Residual Chlorine Check Required?			
If samples were shipped was there an air bill #?..			
Sample Custodian Signature/Date.....	Y		



STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: S. ROSA/PAL / B. BROOKS
 Contact: _____
 Company: MWH
 Address: JOLIET FIELD OFFICE
 Phone: 815 423 6541
 Fax: _____
 E-Mail: _____

Bill To: _____
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 250 012

Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on Ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: 37
 Within Hold Time: Yes No
 Preserv. Indicated: Yes No NA
 pH Check OK: Yes No NA
 Res Cl. Check OK: Yes No NA
 Sample Labels and COC Agree: Yes No
 CDC not present: Yes No

Sampler Name:		Signature:		Refr. #		# / Cont.		Volume		Preserv.		Matrix		Comp/Grab		Pb TLLP		PCB		8330	
<u>RYAN YOUNG</u>		<u>[Signature]</u>																			
Project Name:		Project Number:																			
<u>LAP SOLLS</u>																					
Project Location:		Date Required:																			
Lab PM:		Hard Copy:																			
Date Required:		Fax:																			
Laboratory ID	MIS-MSD	Client Sample ID	Date	Time	Matrix	Comp/Grab	Pb TLLP	PCB	8330												
1		JPLS-K1 (1)	1-9-07	1000	S	C		X													
2		K2 (1)		1020				X													
3		K3 (1)		1040				X													
4		K4 (1)		1100				X													
5		K5 (1)		1120				X													
6		JPLS-L1 (1)		1140				X	X												
7		L2 (1)		1200			X	X	X												
8		L3 (1)		1220			X	X	X												
9		L4 (1)		1240			X	X	X												
10		L5 (1)		1300			X	X	X												

Additional Analyses / Remarks

2 DAY TAT
 WO- 023
 BOA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 1/9/07 TIME: 1600
 RECEIVED BY: [Signature] COMPANY: STL DATE: 1/10/07 TIME: 1700

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Sol
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wide-mouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: _____
 Courier: STL Hand Delivered
 Bill of Lading: _____

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 250012

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
7, 9, 10	digestion to ICP	Lisa Peebles	T. S. Am	11/11/07	10:30	
7, 9, 10	ICP	T. S. Am	Am 5-172	11/12/07	09:00	

rpjsckl	Job Sample Receipt Checklist Report		V2
Job Number.: 250012	Location.: 57222	Check List Number.: 1	Description.:
Customer Job ID.....	Job Check List Date.: 01/09/2007		Date of the Report.: 01/24/2007
Project Number.: 20005627	Project Description.: JOAAP: LAP	Contact.: Brigid Brooks	Project Manager.....: rcw
Customer.....: MWH Americas, Inc.			
Questions ?	(Y/N)	Comments	
Chain-of-Custody Present?.....	Y		
Were samples dropped off at or picked up by STL?... Y			
Custody seal on shipping container?..... Y			
...If "yes", custody seal intact?..... Y			
Custody seals on sample containers?..... N			
...If "yes", custody seal intact?.....			
Samples iced?..... Y			
Temperature of cooler acceptable? (4 deg C +/- 2). Y 3.7			
Samples received intact (good condition)?..... Y			
Volatile samples acceptable? (no headspace).....			
Correct containers used?..... Y			
Adequate sample volume provided?..... Y			
Samples preserved correctly?..... Y			
Samples received within holding-time?..... Y			
Agreement between COC and sample labels?..... Y			
Radioactivity at or below background levels?..... Y			
A Sample Discrepancy Report (SDR) was needed?..... N			
Residual Chlorine Check Required?			
If samples were shipped was there an air bill #?..			
Sample Custodian Signature/Date..... Y			



STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

COC: 011007

Report To:

Contact: S. Rosypal / B. Brooks
 Company: MWH
 Address: JOLIET FIELD OFFICE
 Phone: 815-423-6841
 Fax:
 E-Mail:

Bill To:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only _____ of _____

Lab Lot# 250-023

Package Sealed <input checked="" type="radio"/> Yes <input type="radio"/> No	Samples Sealed <input checked="" type="radio"/> Yes <input type="radio"/> No
Received on ice <input checked="" type="radio"/> Yes <input type="radio"/> No	Samples Intact <input checked="" type="radio"/> Yes <input type="radio"/> No
Temperature °C of Cooler <u>25</u>	
Within Hold Time <input checked="" type="radio"/> Yes <input type="radio"/> No	Presery Indicated <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA
pH Check OK <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA	Res. Cl. Check OK <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> NA
Sample Labels and COC Agree <input checked="" type="radio"/> Yes <input type="radio"/> No COC not present	

Sampler Name: RYAN YOUNG
 Signature: [Signature]
 Project Name: LAP SOILS
 Project Number:
 Project Location:
 Date Required:
 Lab PM: Hard Copy: Fax:

Ref. #	Comp.	Volume	Preser.

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PB	T	L	D	S	M	I	O	C	
			Date	Time												
		JPM12-HUMP 2(1)	1-10-07	1005	S	G										
		↓ HUMP 8(1)	↓	1035	↓	↓										
		↓ HUMP 9(1)	↓	1040	↓	↓										

Additional Analyses / Remarks

2 DAY TAT

WU-023

BOA-4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 1/10/07 TIME 1500
 RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____
 RECEIVED BY [Signature] COMPANY STL DATE 01/10/07 TIME 1325
 RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air

SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: / /
 Courier: Hand Delivered
 Bill of Lading

STL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 250023

Client: JOAPP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-3	TCLP	<i>[Signature]</i>	Paul G. Kelmph	1-11-07	0947	
1-3	TCLP	Paul G. Kelmph	<i>[Signature]</i>	1-11-07	1110	

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250023 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 01/10/2007 Date of the Report...: 01/12/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?... Y
 Custody seal on shipping container?..... Y
 ...If "yes", custody seal intact?..... Y
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?...
 Sample Custodian Signature/Data..... Y

Report To:

Bill To:

Shaded Areas For Internal Use Only 1 of 2



Contact: S. Ruppel/B. Brooks
 Company: MWH
 Address: Juliet Field Office
 Phone: 815-423-6841
 Fax:
 E-Mail:

Contact: same
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

STL Chicago 01/207A
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Lab Lot# 250051

Package Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Temperature °C of Cooler <u>4.4</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> COC not present	

Sampler Name: Jared Schmitt Signature: [Signature] Refrg #
 Project Name: LAP Soil Project Number: Volume
 Project Location: Date Required: Hard Copy: Preserv.
 Lab PM: Fax:

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	8330	Pb	Cr	Cu	Zn	As	Additional Analyses / Remarks
			Date	Time									
1		JPL3-CP1(1)	1/12/07	900	S	G	✓	✓	✓	✓			
2		CP2(1)		905	S	G	✓	✓	✓	✓			BOA: 4016
3		CP3(1)		910	S	G	✓	✓	✓	✓			WO: 023
4		CP4(1)		915	S	G	✓	✓	✓	✓			
5		CP5(1)		920	S	G	✓	✓	✓	✓			
6		CP6(1)		925	S	G	✓	✓	✓	✓			
7		CP7(1)		930	S	G	✓	✓	✓	✓			
8		CP8(1)		935	S	G	✓	✓	✓	✓			
9		CP9(1)		940	S	G	✓	✓	✓	✓			2 day TAT

RELINQUISHED BY [Signature] COMPANY MWH DATE 1/12/07 TIME 1600 RECEIVED BY [Signature] COMPANY [Signature] DATE 1/12/07 TIME 1335

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 1/12/07
 Courier: STL Hand Delivered [Signature]
 Bill of Lading

SEVERN TREN T STL

STL Chicago
 2417 Bond Street 011207B
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. Rosypal / B. Brooks
 Company: MWH
 Address: Joint Field Office
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To:

Contact: Same
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 2 of 2

Lab Lot# 250051

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	

Sampler Name: <u>Jared Schmidt</u>	Signature: <u>[Signature]</u>	Ref #																		
Project Name: <u>LAP Soil</u>	Project Number:	# / Cont.																		
Project Location:	Date Required	Volume																		
Lab PM:	Hard Copy: <u> </u>	Preserv:																		

Within Hold Time Yes No	Preserv. Indicated Yes No NA
pH Check OK Yes No NA	Rec Cl ₂ Check OK Yes No NA
Sample Labels and GOC Agree Yes No	
GOC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Preservative							
			Date	Time			8330	Pb	Cr	Cu	Zn	Ag		
10		JPL3-CP10(1)	1/12/07	945	S	G	✓	✓		✓	✓	✓		
11		CP11(1)		950	S	G	✓	✓		✓	✓	✓		
12		CP12(1)		955	S	G	✓	✓		✓	✓	✓		
13		CP13(1)		1000	S	G	✓	✓		✓	✓	✓		
14		CP14(1)		1005	S	G	✓	✓		✓	✓	✓		
15		CP15(1)		1010	S	G	✓	✓		✓	✓	✓		
16		CP16(1)		1015	S	G	✓	✓		✓	✓	✓		
17		CP17(1)		1020	S	G	✓	✓		✓	✓	✓		
18		CP18(1)		1025	S	G	✓	✓		✓	✓	✓		
19		CP19(1)		1030	S	G	✓	✓		✓	✓	✓		
20		CP20(1)		1035	S	G	✓	✓		✓	✓	✓		
21		CP21(1)		1040	S	G	✓	✓		✓	✓	✓		

Additional Analyses / Remarks

BOA: 4016
 WO: 023
 2 day TAT

RELINQUISHED BY [Signature] COMPANY MWH DATE 1/12/07 TIME 1600

RECEIVED BY [Signature] COMPANY [Signature] DATE 1/12/07 TIME 1530

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 1/12/07
 Courier STL Hand Delivered [Signature]
 Bill of Lading

**STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record**

Job No: 250051

Client: JOANN

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-21	OPPO	[Signature]	[Signature]	01/10/07	1800	
1-21	OPPO	[Signature]	[Signature]	01/12/07	1900	
1-21	metals	[Signature]	[Signature]	1/15/07	0725	
1-21	metals	[Signature]	[Signature]	1/15/07	0910	
1-21	% Solids	[Signature]	[Signature]	1-15-07	0935	
1-21	% Solids	[Signature]	[Signature]	1-15-07	1100	

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 250051

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
H-10	digestion to ICP	Lina Paeble	T-SM	1/15/07	1300	
1-10	ICP	T-SM	K.S-17H	1/17/07	08:00	

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 250051

Client: JOGAR

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
11-21	digesting to ICP	<i>Lisa Peckle</i>	<i>T. Gu</i>	11/15/07	1300	
11-21	ICP	<i>T. Gu</i>	<i>Rm 5-17H</i>	11/17/07	09:00	

rpjsckl Job Sample Receipt Checklist Report

V2

Job Number.: 250051 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 07/12/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Date of the Report...: 01/25/2007
 Customer.....: MNH Americas, Inc. Contact.: Brigid Brooks Project Manager.....: rcv

Questions ? (Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.4
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?... N
- Sample Custodian Signature/date..... Y

250056 1 of 1

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211
 coc: 122706 A

Report To: **S. Kosupal / B. Brooks**
 Contact: **MWH Field Office**
 Company: **MWH Field Office**
 Address: _____
 Phone: **815-423-6841**
 Fax: **Suzanne.Kosupal@**
 E-Mail: **mwhglobal.com**

Bill To: **Same**
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only

Lab Lot# **24994A**

Package Sealed	Quantity Correct
Yes (X) No	Yes (X) No
Repacked in Us	Supplier Contact
Yes No	Yes No
Temperature °C of Cooler	

Within Hold Time	Program Indicated
Yes No (X)	Yes No (X)
pH Check OK	Res. Cl. Check OK
Yes No (X)	Yes No (X)
Sample Labels and COC Agree	
Yes No (X)	COC: not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	Analytes								
							8330	PAH	Total Ph	Arsenic	Cadmium	Copper			
1		JPM3-ITFAP98 (1)	12/27/06	1315	S G	✓	✓	✓							
2		AP99 (1)		1320	S G	✓	✓	✓							
3		AF249 (3)		1325	S G	✓	✓	✓							
4		AF 250 (3)		1330	S G	✓	✓	✓							
5		AF 251 (3)		1335	S G	✓	✓	✓	✓	✓	✓				
6		AF 252 (3)		1340	S G	✓	✓	✓							
7		AF 253 (3)		1345	S G	✓	✓	✓	✓	✓	✓				
8		AF 254 (3)		1350	S G	✓	✓	✓							

Additional Analyses / Remarks

SOAAP LAP

BOA4016 WO 023

JAT: 2 day

RELINQUISHED BY: **Suzanne Kosupal** COMPANY: **MWH** DATE: **12/27/06** TIME: **1500** RECEIVED BY: **[Signature]** COMPANY: **STL** DATE: **12/27/06** TIME: **1450**

RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____ RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

Matrix Key:
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air

SE = Sediment
SC = Solid
DS = Drown Solid
DL = Drown Liquid
L = Leachate
WI = Wipe
O =

Container Key:
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key:
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS: **Follow LCG**

Date Received: **12/27/06**
 Courier: **STL** Hand Delivered:
 Bill of Lading: _____

Job Sample Receipt Checklist Report

rpjckl

Job Number.: 250056 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 01/19/2007 Date of the Report.: 01/25/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MJH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?..
- Custody seal on shipping container?.....
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?.....
- ...If "yes", custody seal intact?.....
- Samples iccd?.....
- Temperature of cooler acceptable? (4 deg C +/- 2).
- Samples received intact (good condition)?.....
- Volatile samples acceptable? (no headspace).....
- Correct containers used?.....
- Adcquate sample volume provided?.....
- Samples preserved correctly?.....
- Samples received within holding-time?.....
- Agreement between COC and sample labels?.....
- Radioactivity at or below background levels?.....
- A Sample Discrepancy Report (SDR) was needed?.....
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?..
- Sample Custodian Signature/Date.....

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

01/207A

250104 1 of 2

Report To: S. Roszpal/B. Brooks
 Contact: S. Roszpal/B. Brooks
 Company: MWH
 Address: Laurel Field Office
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To: _____
 Contact: same
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____
 Quote: _____

Shaded Areas For Internal Use Only

Lab Lot# 250051

Sampler Name: Jared Schmidt Signature: [Signature]
 Project Name: LAP Soil Project Number: _____
 Project Location: _____ Date Required: _____
 Lab PM: _____ Hard Copy: _____
 Fax: _____

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Repacked in Ice Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Seal Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler _____	
Within Time Limit Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>
QC Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	Res. Cl. Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>
Sample Labels and CDC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CDC not present <input type="checkbox"/>	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cr	Cu	Zn	As	Additional Analyses / Remarks
			Date	Time								
1		JPL3-CP1(1)	1/12/07	900	S	G	✓	✓	✓	✓		
2		CP2(1)		905	S	G	✓	✓	✓	✓		BOA: 4016
		CP3(1)		910	S	G	✓	✓	✓	✓		WO: 023
		CP4(1)		915	S	G	✓	✓	✓	✓		
3		CP5(1)		920	S	G	✓	✓	✓	✓		2 day TAT
		CP6(1)		925	S	G	✓	✓	✓	✓		
		CP7(1)		930	S	G	✓	✓	✓	✓		
		CP8(1)		935	S	G	✓	✓	✓	✓		
		CP9(1)		940	S	G	✓	✓	✓	✓		

RELINQUISHED BY: <u>[Signature]</u> COMPANY: <u>MWH</u> DATE: <u>1/12/07</u> TIME: <u>1600</u>	RECEIVED BY: <u>[Signature]</u> COMPANY: <u>STL</u> DATE: <u>1/12/07</u> TIME: <u>1535</u>
RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____	RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
- YW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SG = Solids
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Waste
 - O = Other
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wide-mouth Glass
 6. Other
- Preservatives Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: 1/12/07

Courier: STL Hand Delivered:

Bill of Lading

250104
Shaded Areas For Internal Use Only 2 of 200

**SEVERN
TRENT STL**

STL Chicago
2417 Bond Street 011207 B
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To: Contact: S. Rosypal / B Brooks
Company: MWH
Address: Juliet Field Office
Phone: 915-423-6841
Fax:
E-Mail:

BH To: Contact: Same
Company:
Address:
Phone:
Fax:
PO#: Quota:

Lab Lot# 250051

Sampler Name:		Signature:		Matrix												Within Hold Time		Presure Indicated				
<u>Jared Schmidt</u>		<u>[Signature]</u>														Yes No		Yes No NA				
Project Name:		Project Number:		Matrix												All Check OK			Max Cl, Check OK			
<u>LAP Soil</u>																Yes No NA			Yes No NA			
Project Location:		Date Required		Matrix												Sample Labels and CMC Agree						
		Hard Copy: / / Fax: / /														Yes No GUC not present						
Laboratory ID	MS-MISD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	8330	Pb	Cr	Cu	Zn	Ag	Additional Analyses / Remarks									
10		JPL3-CP10(i)	1/12/07	945	S	G	✓	✓	✓	✓	✓	✓										
11		CP11(i)		950	S	G	✓	✓	✓	✓	✓	✓	BOA: 4016									
12		CP12(i)		955	S	G	✓	✓	✓	✓	✓	✓	WO: 023									
13		CP13(i)		1600	S	G	✓	✓	✓	✓	✓	✓	2 day TAT									
14		CP14(i)		1605	S	G	✓	✓	✓	✓	✓	✓										
15		CP15(i)		1610	S	G	✓	✓	✓	✓	✓	✓										
16		CP16(i)		1615	S	G	✓	✓	✓	✓	✓	✓										
17		CP17(i)		1620	S	G	✓	✓	✓	✓	✓	✓										
18		CP18(i)		1625	S	G	✓	✓	✓	✓	✓	✓										
19		CP19(i)		1630	S	G	✓	✓	✓	✓	✓	✓										
20		CP20(i)		1635	S	G	✓	✓	✓	✓	✓	✓										
21		CP21(i)	✓	1640	S	G	✓	✓	✓	✓	✓	✓										

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 1/12/07 TIME: 1600 RECEIVED BY: [Signature] COMPANY: [Signature] DATE: 1/21/07 TIME: 1535

- Matrix Key:**
 WW - Wastewater
 W - Water
 S - Soil
 SL - Sludge
 MS - Miscellaneous
 OL - Oil
 A - Air
 SE - Sediment
 SO - Solid
 DS - Drum Solid
 DL - Drum Liquid
 L - Leachate
 VM - Vials
 O -
- Container Key:**
 1. Plastic
 2. VOA vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key:**
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: 1/12/07
 Courier: STC Hand Delivered:
 Bill of Lading:

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250104 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 01/22/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 01/22/2007
 Project Manager.....: rcd

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace)..... Y
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample Labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required? Y
- If samples were shipped was there an air bill #?.. Y
- Sample Custodian Signature/Date..... Y

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250051 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 01/12/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MNH Americas, Inc. Contact.: Brigid Brooks

Date of the Report.: 01/22/2007
 Project Manager.....: rcv

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.4
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?.. N
- Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago
 2417 Bond Street (OC: 414287)
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. ROSYPH / B Blocks
 Contact: MWH
 Company: JOLIET FIELD OFFICE
 Address: _____
 Phone: 815-423-6847
 Fax: _____
 E-Mail: _____

Billing To: SAME
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

250108
 Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 249966

Packages Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>2</u>	
Wipe Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Res Cl. Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Sample labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Additional Analyses / Remarks

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Preserv.		F / Cont.	Vials	Pipes
			Date	Time			Matrix	Comp/Grab			
1		JPLE-A1 (1)	1/2/07	1000	S	C	X	X			
2		A2 (1)		1005			X	X			
3		A3 (1)		1010			X	X			
4		A4 (1)		1015			X	X			
5		A5 (1)		1020			X	X			
6		B1 (1)		1025			X	X			
7		B2 (1)		1030			X	X			
8		B3 (1)		1035			X	X			
9		B4 (1)		1040			X	X			
10		B5 (1)		1045			X	X			

2 DAY TEST
 ND: 023
 BDA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 1-2-07 TIME 1600

RECEIVED BY [Signature] COMPANY STL DATE 1/2/07 TIME 1600

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O = Other
- Container Key**
1. Plastic
 2. VDA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wicemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 1/1

Courier: Hand Delivered

Bill of Lading

SEVERN TREN T ST L

STL Chicago COC: 013067B
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: SRoss/PAH / R. Brooks
 Company: MWH
 Address: John Field Office
 Phone: 815-423-6641
 Fax:
 E-Mail:

Bill To:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 250164

Package Sealed Yes <input type="radio"/> No <input checked="" type="radio"/>	Samples Sealed Yes <input type="radio"/> No <input checked="" type="radio"/>
Received on Ice Yes <input type="radio"/> No <input checked="" type="radio"/>	Samples Intact Yes <input type="radio"/> No <input checked="" type="radio"/>
Temperature °C of Cooler <u>4.3</u>	
Within Hold Time Yes <input type="radio"/> No <input checked="" type="radio"/>	Preserv. Indicated Yes <input type="radio"/> No <input checked="" type="radio"/> NA
pH Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA	Res Cl. Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA
Sample Labels and COC Agree Yes <input type="radio"/> No <input checked="" type="radio"/> COC not present	

Sampler Name: <u>RYAN YOUNG</u>	Signature: <u>[Signature]</u>	Refrig #												
Project Name: <u>LAP SOILS</u>	Project Number:	# / Cont:												
Project Location:	Date Required	Volume:												
Lab PM:	Hard Copy: _____	Preserv:												

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab											Additional Analyses / Remarks
		JPM12-4F12(2)	1/30/07	1000	S	G	X										2 DAY TAT
		↓ AP86(1)	↓	1005	↓	↓	X										WD: 023
		↓ AP87(1)	↓	1010	↓	↓	X										BDA: 40L4
		↓ AP88(1)	↓	1015	↓	↓	X										

RELINQUISHED BY: <u>[Signature]</u> COMPANY: <u>MWH</u> DATE: <u>1/30/07</u> TIME: <u>1230</u>	RECEIVED BY: <u>[Signature]</u> COMPANY: <u>STL</u> DATE: <u>1/30/07</u> TIME: <u>1401</u>
RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____	RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
 - WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Wipe
 - O =
- Container Key**
 - 1. Plastic
 - 2. VOA Vial
 - 3. Sterile Plastic
 - 4. Amber Glass
 - 5. Wide-mouth Glass
 - 6. Other
- Preservative Key**
 - 1. HCl, Cool to 4°
 - 2. H2SO4, Cool to 4°
 - 3. HNO3, Cool to 4°
 - 4. NaOH, Cool to 4°
 - 5. NaOH/Zn, Cool to 4°
 - 6. Cool to 4°
 - 7. None

COMMENTS:

Date Received 1/30/07

Courier: STL Hand Delivered

Bill of Lading:

**STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record**

Job No: 250164

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-4	metals	Jt	L Odesha	1/31/07	07:30	
1-4	metals	L Odesha	Jt	1/31/07	8:25	
1-4	% Solids	Jt	Paul P. Klump	1-31-07	0910	
1-4	% Solids	Paul P. Klump	Jt	1-31-07	0945	

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250164 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 01/30/2007
 Project Number.: 20005627 Project Description.: JOHAP: LAP
 Customer.....: MMH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 01/30/2007
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?... N
- Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago COC: 020107
 2417 Band Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. R. SYPAL / B. BROOKS
 Contact: _____
 Company: MWH
 Address: JOLIET FIELD OFFICE
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To: CHL
 Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Lab Lot# 250183

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler <u>35</u>	
Within Hold Time Yes No	Preserv. Indicated Yes No NA
pH Check OK Yes No NA	Res Cl. Check OK Yes No NA
Sample Labels and COC Agree Yes No COC not present	

Sampler Name: RUAN YOUNG Signature: [Signature]
 Project Name: LAP SOLDS Project Number: _____
 Project Location: _____ Date Required: _____
 Lab PM: _____ Hard Copy: _____
 Fax: _____

Laboratory ID	MIS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	P	A	H	T	O	T	O	T	O	T	O	T	O	
			Date	Time																
1		JPM3-ITF-AF259(2)	2/1/07	0900	S	G	X	X	X											
2		AF260(2)		0905			X	X	X											
3		AP100(1)		0910			X													
4		AP101(1)		0915			X													
5		AP102(1)		1300			X													

Additional Analyses / Remarks
2 DAY TAG
WO: 023
BOA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 2/1/07 TIME: 1500
 RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

RECEIVED BY: [Signature] COMPANY: STL DATE: 02/01/07 TIME: 1500
 RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SD = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Wipe
 - O = _____
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS: _____
 Date Received: 02/01/07
 Courier: _____ Hand Delivered: [Signature]
 Bill of Lading: _____

rpjsckl Job Sample Receipt Checklist Report

Job Number.: 250183 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 02/01/2007 Date of the Report.: 02/02/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: NWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 3.5
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-times?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?... N
- Sample Custodian Signature/Data?..... Y

SEVERN TRENT STL

STL Chicago COC: 620107
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. RASPAI R. BROOKS
 Company: MWH
 Address: LOUET-FIELD OFFICE
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To: CMU

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 250183
 Package Sealed: Yes No
 Received on Ice: Yes No
 Temperature °C of Cooler: 3.5

Sampler Name:		Signature:		Refr #		# / Cont.		Volume		Preserv		Within Hold Time		Preserv. Indicated	
<u>RYAN YOUNG</u>		<u>[Signature]</u>										Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
Project Name:		Project Number:		Date Required		Hard Copy:		Matrix		Comp/Grab		pH Check OK		Res. Cl ₂ Check OK	
<u>LAP SOILS</u>						Yes <input type="checkbox"/> No <input type="checkbox"/>		<u>PAH</u>		<u>TOTAL Pb</u>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
Project Location:		Date Required		Hard Copy:		Fax:		Matrix		Comp/Grab		Sample Labels and COC Agree		COC not present	
<u>LAB PM:</u>				Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>		<u>PAH</u>		<u>TOTAL Pb</u>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		COC present	
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	TOTAL Pb	Pb	TCUP	Additional Analyses / Remarks					
<u>1</u>		<u>JPM3-ITF-AF259(2)</u>	<u>2/1/07</u>	<u>0900</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>2 DAY PAH</u>					
<u>2</u>		<u>AF260(2)</u>	<u> </u>	<u>0905</u>	<u> </u>	<u> </u>	<u>X</u>	<u>X</u>	<u>X</u>						
<u>3</u>		<u>AP100(1)</u>	<u> </u>	<u>0910</u>	<u> </u>	<u> </u>	<u>X</u>			<u>WO: 623</u>					
<u>4</u>		<u>AP101(1)</u>	<u> </u>	<u>0915</u>	<u> </u>	<u> </u>	<u>X</u>								
<u>5</u>		<u>AP102(1)</u>	<u>↓</u>	<u>300</u>	<u>↓</u>	<u>↓</u>	<u>X</u>			<u>BOA: 4816</u>					

RECEIVED BY: [Signature] COMPANY: MWH DATE: 2/1/07 TIME: 1500

RECEIVED BY: [Signature] COMPANY: STL DATE: 02/01/07 TIME: 1600

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 DL = Oil
 A = Az

SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O = _____

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: 02/01/07
 Courier: _____ Hand Delivered:
 Bill of Lading: [Signature]

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 250183

Client: JDAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1.2	Digestion to Ice	Jim Peckles	T. SM	2/2/07	1330	
1.2	IV	T. C. C.	Mr S-197	2/2/07	12:00	

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250183 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 02/01/2007 Date of the Report...: 02/02/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: PCW
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2)..... Y 3.5
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?... N
- Sample Custodian Signature/Data..... Y

**SEVERN
TRENT** **STL**

STL Chicago LOC: 613067B
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. ROSE/PAH / R. BROOKS
Company: AWW
Address: SOLDIER FIELD OFFICE
Phone: 815-423-6841
Fax:
E-Mail:

BBI To:

Contact:
Company:
Address:
Phone:
Fax:
PC#: Quote:

Shaded Areas For Internal Use Only

2501921

Lab Lot# 250164

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler 4.3	
Within Hold Time Yes No	Preserv. Indicated Yes No NA
pH Check OK Yes No NA	Res. Cl. Check OK Yes No NA
Sample Labels and CDC Agree Yes No	CDC not present

Sampler Name: RYAN YOUNT Signature: [Signature]
Project Name: LAP SOILS Project Number:
Project Location: Date Required: _____
Lab PM: Hard Copy: _____
Fax: _____

Matrix	Comp/Grab	TO/PP6

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	TO/PP6	Additional Analyses / Remarks
1		1PM12 - AF12 (2)	1/30/07	10:00	S	G	X	2 DAY TAT
2		APB6 (1)		10:05			X	
3		APB7 (1)		10:10			X	WD: 023
4		APB8 (1)		10:15			X	BDA: 4014

RELINQUISHED BY [Signature] COMPANY MAWH DATE 1/30/07 TIME 11:30

RECEIVED BY [Signature] COMPANY STL DATE 1/30/07 TIME 1401

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - CL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Dism Solid
 - DL = Dism Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Micromouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 1/30/07

Courier: STL Hand Delivered

Bill of Lading

SEVERN TRENT STL

STL Chicago **COC: 020207**
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Bill To: **SAMS**

Shaded Areas For Internal Use Only 1 of 1

Contact: **S. ROSYPAL B. BROOKS**
 Company: **MWH**
 Address: **FOUR FIVE OFFICE**
 Phone: **815-4236041**
 Fax:
 E-Mail:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Lab Lot# **250195**
 Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on Ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: **4/0**

Sampler Name: **RYAN YOUNG**
 Project Name: **LAP SOILS**
 Project Location:
 Lab PM:

Signature: *[Signature]*
 Project Number:
 Date Required:
 Hard Copy:
 Fax:

Refg #	F / Cont	Volume	Preserv	Matrix	Comp/Grab	PAH													
						X													

Within Hold Time: Yes No
 Preserv. Indicated: Yes No NA
 pH Check OK: Yes No NA
 Res Cl. Check OK: Yes No NA
 Sample Labels and COC Agree: Yes No
 COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PAH													Additional Analyses / Remarks		
			Date	Time																		
		JPM3-ITF-APLO3 (1)	2/2/07	1000	S	S	X														2 DAY TAT	
																						WO: 023
																						BDA: 4016

RELINQUISHED BY: *[Signature]* COMPANY: **MWH** DATE: **2/2/07** TIME: **1530**

RECEIVED BY: *[Signature]* COMPANY: **CR** DATE: **02/02/07** TIME: **1530**

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O =

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wide-mouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: **02/02/07**
 Courier: Hand Delivered
 Bill of Lading: *[Signature]*

Job No: 250198

Client: JOHNS

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1	020 extractions	<i>[Signature]</i>	<i>[Signature]</i>	2-20-07	1630	
1	% Solids	<i>[Signature]</i>	<i>[Signature]</i>	2-27-07	1130	
1	% Solids	<i>[Signature]</i>	<i>[Signature]</i>	2-27-07	1415	

Job Sample Receipt Check List Report

rpjsckl

Job Number.: 250195 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 02/02/2007 Date of the Report...: 02/05/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWR Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... Y
- ...If "yces", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yces", custody seal intact?.....
- Samples iccd?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?...
- Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago COC: 022107B
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. ROSYPAN / B. BROOKS
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: 815-423-6841
Fax:
E-Mail:

Bill To: SAME
Contact:
Company:
Address:
Phone:
Fax:
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only 2 of 3

Lab Lot# 250253 12

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. Indicated Yes No NA
pH Check OK Yes No NA	Res Cl₂ Check OK Yes No NA
Sample Labels and COC Agree Yes No COC not present	
Additional Analyses / Remarks	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	8330	Refrg #	# / Cont.	Volume	Preserv
			Date	Time							
13		JPL2-AP45 (-5)	2/21/07	1005	S	G	X				
14		AP46 (-5)		1010			X				
15		AP47 (-5)		1015			X				
16		AF 32 (1)		1020			X				
17		AP48 (-5)		1025			X				
18		AP49 (-5)		1030			X				
19		AP51 (-5)		1045			X				
20		AF 33 (1)		1050			X				
21		CP61 (2)		1055			X				
22		CP62 (2)		1100			X				
23		CP63 (2)		1105	✓	✓	X				

2 DAY TAT

WO: 023

BDA: 4/16

RELINQUISHED BY <u>S. Rosypan</u>	COMPANY <u>MWH</u>	DATE <u>2/21/07</u>	TIME <u>1604</u>	RECEIVED BY <u>[Signature]</u>	COMPANY <u>STL</u>	DATE <u>2/21/07</u>	TIME <u>1600</u>
RELINQUISHED BY _____	COMPANY _____	DATE _____	TIME _____	RECEIVED BY _____	COMPANY _____	DATE _____	TIME _____

- | | | |
|--|--|--|
| Matrix Key | Container Key | Preservative Key |
| WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Damm Liquid
L = Leachate
WI = Wipe
O = _____ | 1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
_____ | 1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None |

COMMENTS

Date Received 2/21/07

Courier: STL **Hand Delivered** [Signature]

Bill of Lading

STL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 250253

Client: JOAAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-33	EXP			2/21/07	17:15	
1-33	EX			2/21/07	18:20	

rpjsck\

Job Sample Receipt Checklist Report

V2

Job Number.: 250253 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 02/21/2007
 Project Number.: 20005627 Project Description.: JDAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 02/23/2007
 Project Manager.....: rcw

Questions ?	(Y/N) Comments
Chain-of-Custody Present?.....	Y
Were samples dropped off at or picked up by STL?... Y	
Custody seal on shipping container?..... N	
...If "yes", custody seal intact?..... N	
Custody seals on sample containers?..... N	
...If "yes", custody seal intact?.....	
Samples iced?..... Y	
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0	
Samples received intact (good condition)?..... Y	
Volatile samples acceptable? (no headspace).....	
Correct containers used?..... Y	
Adequate sample volume provided?..... Y	
Samples preserved correctly?..... Y	
Samples received within holding-time?..... Y	
Agreement between COC and sample labels?..... Y	
Radioactivity at or below background levels?..... Y	
A Sample Discrepancy Report (SDR) was needed?..... N	
Residual Chlorine Check Required?	
If samples were shipped was there an air bill #?... N	
Sample Custodian Signature/Date..... Y	

**SEVERN
TRENT
STL**

STL Chicago *Cell. 8209 07*
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: *S. Raczynski B. Brooks*
 Company: *MWH*
 Address: *Southfield Office*
 Phone: *815-423-6841*
 Fax:
 E-Mail:

Bill To: *SAME*

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# *250224*
 Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on Ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: *4.0*

Sampler Name: *RYAN YOUNG*
 Signature: *[Signature]*
 Project Name: *LAP SOILS*
 Project Number:
 Project Location:
 Date Required:
 Lab PM:
 Hard Copy:
 Fax:

Refr. #	# / Cont.	Volume	Preserv

Within Hold Time: Yes No
 Preserv. Indicated: Yes No NA
 pH Check OK: Yes No NA
 Res Cl₂ Check OK: Yes No NA
 Sample Labels and COC Agree: Yes No
 COC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	As	Zn	Cu	TPH	DRO/Geo	8330	TOTAL Pb	Sb	Ag	Tl	Ba	Additional Analyses / Remarks
			Date	Time														
1		JPM3-ITF-AF 37B (1)	2/9/07	0900	S	G	X	X	X									2 DAY TAT
2		AF 97B (1)		0905				X	X									WO: 023
3		AF 49B (1)		0910				X	X		X	X	X	X	X	X		BDA: 4016
4		AF 208B (1)		0915			X		X	X								
5		AF 209B (1)		0920			X		X	X								
6		AF 205B (1)		0925				X	X					X		X	X	
7		AF 215B (1)		0930				X	X					X		X	X	
8		AF 227B (1)		0935							X							

RELINQUISHED BY: *[Signature]* COMPANY: *MWH* DATE: *2/9/07* TIME: *1530*
 RELINQUISHED BY: COMPANY: DATE: TIME:

RECEIVED BY: *[Signature]* COMPANY: *STL* DATE: *02/09/07* TIME: *1530*
 RECEIVED BY: COMPANY: DATE: TIME:

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 OS = Drum Solid
 OL = Drum Liquid
 L = Leachate
 WL = Waste
 O =

Container Key
 1. Plastic
 2. VOA Wal
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: *1/1*
 Courier: *Hand Delivered*
 Bill of Lading

Job Number.: 250224 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 02/09/2007 Date of the Report.: 02/12/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?.. Y
 Custody seal on shipping container?..... N
 ...If "yes", custody seal intact?.....
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?.. N
 Sample Custodian Signature/Date..... Y

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250262 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 02/22/2007 Date of the Report.: 02/23/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Contact.: Brigid Brooks Project Manager.....: rcw
 Customer.....: MWH Americas, Inc.

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between CDC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?..
- Sample Custodian Signature/Date..... Y

**SEVERN
TRENT
STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: S. ROYPAI / B. BROOKS
Company: MWH
Address: JOHN F. FELD OFFICE
Phone: 815-423-6641
E-Mail:

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Lab Lot# 250263

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>N/A</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	Res Cl ₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	COC not present

Sampler Name: RYAN YOUNG
Signature: [Signature]
Project Name: LAP SOIL
Project Number:
Project Location:
Date Required:
Lab PM:
Hard Copy:
Fax:

Refr #	# / Cont.	Volume	Preserv

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Cd	TOTAL Pb	Ag	ARSENIC	Zn	Cu	Pb	TCAP	Additional Analyses / Remarks
			Date	Time											
1		JPL2-AP53 (1)	2/22/07	1230	S	G	X	X	X	X	X	X			2 DAY DAT
2		AP54 (1)		1235			X	X	X	X	X	X			
3		AP55 (1)		1240			X	X	X	X	X	X	X		WO: 023
4		AF34 (2)		1245			X	X	X	X	X	X			
5		AF35 (2)		1250			X	X	X	X	X	X			BOA: 4866
6		AF36 (2)		1255			X	X	X	X	X	X			

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 2/22/07 TIME: 1600
RECEIVED BY: [Signature] COMPANY: [Signature] DATE: 2/22/07 TIME: 1600

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WF = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: 1 1
Courier: [Signature] Hand Delivered:
Bill of Lading:

rpjsckl	Job Sample Receipt Checklist Report		VZ
Job Number.: 250263	Location.: 57222	Check List Number.: 1	Description.:
Customer Job ID.....	Job Check List Date.: 02/22/2007		Date of the Report...: 02/23/2007
Project Number.: 20005627	Project Description.: JOAAP: LAP	Project Manager.....: RCM	
Customer.....: MMH Americas, Inc.	Contact.: Brigid Brooks		
Questions ?	(Y/N)	Comments	
Chain-of-Custody Present?.....	Y		
Were samples dropped off at or picked up by STL?..	Y		
Custody seal on shipping container?.....	Y		
...If "yes", custody seal intact?.....	Y		
Custody seals on sample containers?.....	N		
...If "yes", custody seal intact?.....			
Samples iced?.....	Y		
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0	Y		
Samples received intact (good condition)?.....	Y		
Volatile samples acceptable? (no headspace).....			
Correct containers used?.....	Y		
Adequate sample volume provided?.....	Y		
Samples preserved correctly?.....	Y		
Samples received within holding-time?.....	Y		
Agreement between COC and sample labels?.....	Y		
Radioactivity at or below background levels?.....	Y		
A sample discrepancy report (SDR) was needed?.....	N		
Residual Chlorine Check Required?			
If samples were shipped was there an air bill #?..			
Sample Custodian Signature/Date.....	Y		

SEVERN TRENT STL

STL Chicago COC: 022307A
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. ROSYRAI R. Brooks
 Company: MWH
 Address: TOUET FIELD OFFICE
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Bill To: SAUE

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 2

Lab Lot# 250274

Package Sealed Yes No	Samples Sealed Yes No
--------------------------	--------------------------

Received on Ice Yes No	Samples Intact Yes No
---------------------------	--------------------------

Temperature °C of Cooler
4.6

Within Hold Time Yes No	Preserv. Indicated Yes No <u>NA</u>
----------------------------	--

pH Check OK Yes No <u>NA</u>	Res Cl ₂ Check OK Yes No <u>NA</u>
---------------------------------	--

Sample Labels and GOC Agree Yes No	GOC not present
---------------------------------------	-----------------

Sampler Name: RYAN YOUNG Signature: [Signature]
 Project Name: LAP SOIL Project Number: _____
 Project Location: _____ Date Required: _____
 Lab PM: _____ Hard Copy: _____
 Fax: _____

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab																
			Date	Time																		
1		JPL2-CP73 (0.5)	2/23/07	800	S	G	X															
2		CP74 (0.5)		805			X															
3		CP75 (0.5)		810			X															
4		CP76 (0.5)		815			X															
5		CP77 (0.5)		820			X															
6		CP78 (0.5)		825			X															
7		CP79 (0.5)		830			X															
8		CP80 (0.5)		835			X															
9		CP81 (0.5)		840			X															
10		CP82 (0.5)		845			X															
11		CP83 (0.5)		850			X															
12		CP85 (0.5)		900			X															

Additional Analyses / Remarks

2 DAY TAT

WD: 023

BDA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 2/23/07 TIME: 1400

RECEIVED BY: [Signature] COMPANY: STL DATE: 2/23/07 TIME: 1505

Matrix Key
 WW = Wastewater SE = Sediment
 W = Water SO = Solid
 S = Soil DS = Drum Solid
 SL = Sludge DL = Drum Liquid
 MS = Miscellaneous L = Leachate
 OL = Oil WI = Wipe
 A = Air D = _____

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: 1 1
 Courier: [Signature] Hand Delivered
 Bill of Lading

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street **LOC: 0223 07 B**
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

BIR To: **SAFE**

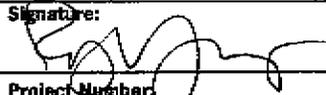
Shaded Areas For Internal Use Only 2 of 2

Contact: **S. ROSYDAI B. BROOKS**
Company: **MWH**
Address: **JOINT FIELD OFFICE**
Phone: **815-423-6841**
E-Mail:

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Lab Lot# **250274**

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler 4.6	

Sampler Name: **Ryan Young**
Signature: 
Project Name: **LAPSOFL**
Project Number:
Project Location:
Date Required:
Lab PM:
Hard Copy: / /
Fax: / /

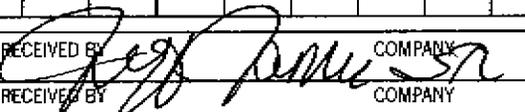
Refr #	# / Cont.	Volume	Preserv

Within Hold Time
Yes No **NA**
Preserv. Indicated
Yes No **NA**
pH Check OK
Yes No **NA**
Res Cl₂ Check OK
Yes No **NA**
Sample Labels and COC Agree
Yes No **COC not present**

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	O	M	M	O
			Date	Time						
13		JPL2-CP87 (0.5)	2/23/07	9:10	S	G	X			
14		CP88 (0.5)		9:15			X			
15		CP89 (0.5)		9:20			X			
16		CP92 (0.5)		9:35			X			

Additional Analyses / Remarks
2 DAY TAT
WO: 023
BOA: 4016

RELINQUISHED BY  COMPANY **MWH** DATE **2/23/07** TIME **1600**

RECEIVED BY  COMPANY **SR** DATE **2/23/07** TIME **1305**

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sudge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =
- Container Key**
- 2. Plastic
 - 3. VOA Vial
 - 4. Sterile Plastic
 - 5. Amber Glass
 - 6. Widemouth Glass
 - 7. Other
- Preservative Key**
- 1. HCl, Cool to 4°
 - 2. H2SO4, Cool to 4°
 - 3. HNO3, Cool to 4°
 - 4. NaOH, Cool to 4°
 - 5. NaOH/Zn, Cool to 4°
 - 6. Cool to 4°
 - 7. None

COMMENTS
Date Received
Courier: **STL** Hand Delivered
Bill of Lading

rpjscki

Job Sample Receipt Checklist Report

VZ

Job Number.: 250274 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 02/25/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report.: 02/26/2007
 Project Manager.....: PCW

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... Y

...If "yes", custody seal intact?..... Y

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.6

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?..

Sample Custodian Signature/Date..... Y

**SEVERN
TRENT** **STL**

STL Chicago (00:022607B)
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5203
Fax: 708-534-5211

Report To:

Contact: S. Roszypal / B. Brooks
Company: MWH
Address: GOLDER FIELD OFFICE
Phone: 815-423-6841
Fax:
E-Mail:

Bill To: CMC

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 2 of 2

Lab Lot# 250285

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.0</u>	

Sampler Name: <u>RYAN YOUNG</u>		Signature: <u>[Signature]</u>		Refrig #															
Project Name: <u>LAPSOIL</u>		Project Number:		# / Cont.															
Project Location:		Date Required		Volume															
Lab PM:		Hard Copy: <u> </u> Fax: <u> </u>		Preserv															
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab													
<u>13</u>		<u>JPL2-AP66 (0.5)</u>	<u>2/26/07</u>	<u>1035</u>	<u>S</u>	<u>G</u>	<u>X</u>												
<u>14</u>		<u>AP67 (0.5)</u>	<u>↓</u>	<u>1040</u>	<u>↓</u>	<u>↓</u>	<u>X</u>												
<u>15</u>		<u>AP68 (0.5)</u>	<u>↓</u>	<u>1045</u>	<u>↓</u>	<u>↓</u>	<u>X</u>												
<u>16</u>		<u>AF40(2)</u>	<u>↓</u>	<u>1155</u>	<u>↓</u>	<u>↓</u>	<u>X</u>												

Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>NA</u>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <u>NA</u>	Res Cl ₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>NA</u>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <u>COC not present</u>	
Additional Analyses / Remarks	

2 DAY JAF
WO: 02
BOA: 4066

RELINQUISHED BY [Signature] COMPANY MWH DATE 2/26/07 TIME 1400

RECEIVED BY [Signature] COMPANY STL DATE 2/26/07 TIME 1500

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received / /

Courier: Hand Delivered

Bill of Lading

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250285 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 02/26/2007 Date of the Report.: 02/28/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	Y	
...If "yes", custody seal intact?.....	Y	
Custody seals on sample containers?.....	N	
...If "yces", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0	Y	
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..		
Sample Custodian Signature/Date.....	Y	

**SEVERN
TRENT
STL**

STL Chicago COC: 0221074
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

EBI To: SAME

250286
Shaded Areas For Internal Use Only 1 of 3

Contact: B.S. ROSDAI / B. BROOK
Company: MWH
Address: HOLDER FIELD OFFICE
Phone: 015-423-6841
Fax: _____
E-Mail: _____

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

Lab Lot# 250253

Package Sealed Yes <input type="radio"/> No <input checked="" type="radio"/>	Samples Sealed Yes <input type="radio"/> No <input checked="" type="radio"/>
Received on Ice Yes <input type="radio"/> No <input checked="" type="radio"/>	Samples Intact Yes <input type="radio"/> No <input checked="" type="radio"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input type="radio"/> No <input checked="" type="radio"/>	Preserv. Indicated Yes <input type="radio"/> No <input checked="" type="radio"/> NA
pH Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA	Res Cl, Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA
Sample Labels and COC Agree Yes <input type="radio"/> No <input checked="" type="radio"/> COC not present	

Sampler Name: RYAN YOUNG Signature: [Signature]
Project Name: LAP SOIL Project Number: _____
Project Location: _____ Date Required: _____
Lab PM: _____ Hard Copy: / /
Fax: / /

Matrix	Comp/Grab	8330																			

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	8330														
X		JPL2-AP35(S)	2/21/07	700	S	G	X														
X		AP29(S)		905			X														
X		AP36(S)		910			X														
X		AP37(S)		915			X														
X		AP38(S)		920			X														
X		AP39(S)		925			X														
X		AP30(S)		930			X														
X		AP40(S)		935			X														
X		AP41(S)		940			X														
X		AP42(S)		945			X														
X		AP43(S)		950			X														
X		AP31(S)		955			X														

Additional Analyses / Remarks

2 DAY TAF
WD: 023
BDA: 4816

RELINQUISHED BY [Signature] COMPANY MWH DATE 2/21/07 TIME 1604

RECEIVED BY [Signature] COMPANY SR DATE 2/21/07 TIME 1600

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SC = Solid
 - DS = Drum Solid
 - CL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O = Other

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 2/21/07
Courier: STL Hand Delivered
Bill of Lading

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250286 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 02/27/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 02/28/2007
 Project Manager.....: rcm

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y RELOG

Were samples dropped off at or picked up by STL?..

Custody seal on shipping container?.....

...If "yes", custody seal intact?.....

Custody seals on sample containers?.....

...If "yes", custody seal intact?.....

Samples iced?.....

Temperature of cooler acceptable? (4 deg C +/- 2).

Samples received intact (good condition)?.....

Volatile samples acceptable? (no headspace).....

Correct containers used?.....

Adequate sample volume provided?.....

Samples preserved correctly?.....

Samples received within holding-time?.....

Agreement between COC and sample labels?.....

Radioactivity at or below background levels?.....

A Sample Discrepancy Report (SDR) was needed?.....

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?..

Sample Custodian Signature/Date.....

**SEVERN
TRENT** **STL**

STL Chicago LOC: 022707
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

BRI To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: C. Rzycka | B. Brooks
 Company: MWH
 Address: Golden Field Office
 Phone: 615-422-6644
 Fax:
 E-Mail:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Lab Lot# 250293
 Package Sealed: Yes (No)
 Received on Ice: Yes (No)
 Temperature °C of Cooler: 4.0
 Samples Sealed: Yes (No)
 Samples Intact: Yes (No)

Sampler Name:		Signature:		Refr #											Within Hold Time	Preserv. Indicated					
RYAN YOUNG		<i>[Signature]</i>		# / Cont.											Yes (No)	Yes (No)	NA				
Project Name:		Project Number:		Volume											pH Check OK		Res Cl ₂ Check OK				
LAP SOIL				Preserv.											Yes (No)	NA	Yes (No)	NA			
Project Location:		Date Required		Matrix	Comp/Grab											Sample Labels and COC Agree					
Lab PM:		Hard Copy: / / Fax: / /														Yes (No)	COG not present				
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab											Additional Analyses / Remarks				
1		JPLZ-AP70 (0.5)	2/27/07	730	S	G	X											2 DAY TEST			
2		AP71 (0.5)		735			X														
3		AP72 (0.5)		1030			X											WD: 023			
4		AP73 (0.5)		1035			X														
5		AP74 (0.5)		1040			X											BDA: 4016			
6		AP73-D (0.5)		1035			X														
7		AP74-D (0.5)		1040			X														

RELINQUISHED BY: *[Signature]* COMPANY: MWH DATE: 2/27/07 TIME: 1500
 RECEIVED BY: *[Signature]* COMPANY: STL DATE: 2/27/07 TIME: 1500

Matrix Key:
 WW = Wastewater, SE = Sediment, W = Water, SQ = Solid, S = Soil, DS = Drum Solid, SL = Sludge, DL = Drum Liquid, MS = Miscellaneous, L = Leachate, OL = Oil, WI = Wipe, A = Air, O =

Container Key:
 1. Plastic, 2. VOA Vial, 3. Sterile Plastic, 4. Amber Glass, 5. Widenmouth Glass, 6. Other

Preservative Key:
 1. HCl, Cool to 4°, 2. H2SO4, Cool to 4°, 3. HNO3, Cool to 4°, 4. NaOH, Cool to 4°, 5. NaOH/Zn, Cool to 4°, 6. Cool to 4°, 7. None

COMMENTS: Date Received 2,27,07
 Courier: STL Hand Delivered:
 BRI of Lading:

SEVERN TRENT STL

STL Chicago LOC: 030507A
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Bill To: SAFE

Shaded Areas For Internal Use Only 1 of 2

Contact: S. Kowal / B.B. Rooks
 Company: MWH
 Address: Lower Field Office
 Phone: 615-423-6641
 Fax:
 E-Mail:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Lab Lot# 250332
 Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: 4.0

Sampler Name:		Signature:		Refrig #															
Project Name:		Project Number:		# / Cont.															
Project Location:		Date Required		Volume															
Lab P/N:		Hard Copy:		Preserv															
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab													
1		JPL2-AP75(0.5)	3/5/07	1100	S	G	X												
2		AF41(2)		1120			X												
3		AP79(0.5)		1125			X												
4		AP80(0.5)		1130			X												
5		AP82(0.5)		1140			X												
6		AF42(2)		1145			X												
7		APB3(0.5)		1150			X												
8		APB4(0.5)		1155			X												
9		APB5(0.5)		1200			X												
10		APB6(0.5)		1203			X												
11		APB7(0.5)		1210			X												
12		APB43(2)		1215			X												

Within Hold Time: Yes No
 Preserv. Indicated: Yes No NA
 pH Check OK: Yes No NA
 Res Cl₂ Check OK: Yes No NA
 Sample Labels and COC Agree: Yes No
 COC not present:

Additional Analyses / Remarks

2. DAN TAG

NO: B23

BDA: 4/16

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 3/5/07 TIME: 1:00 RECEIVED BY: [Signature] COMPANY: SA DATE: 3/5/07 TIME: 16:00
 RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 3/5/07 TIME: 1:00 RECEIVED BY: [Signature] COMPANY: SA DATE: 3/5/07 TIME: 16:00

- | | | |
|---|---|---|
| Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WL = Wipe
O = | Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other | Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None |
|---|---|---|

COMMENTS

Date Received: 3/5/07

Courier: STL Hand Delivered

Bill of Lading

rpjckkl Job Sample Receipt Checklist Report V2

Job Number.: 250332 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 03/05/2007 Date of the Report...: 03/06/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MUH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?...
- Sample Custodian Signature/Date..... Y

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250340 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 03/06/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Date of the Report...: 03/09/2007
 Customer.....: MMH Americas, Inc. Contact.: Brigid Brooks Project Manager.....: rcw

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... Y

...If "yes", custody seal intact?..... Y

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?..

Sample Custodian Signature/Date..... Y

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250373 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 03/12/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MMH Americas, Inc. Contact.: Brigid Brooks

Date of the Report.: 03/13/2007
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iccd?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?..
- Sample Custodian Signature/Date..... Y



STL Chicago **02: 021307A**
 2437 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. ROSYAL / B. BROOKS Bill To: SAME Shaded Areas For Internal Use Only 1 of 1

Contact: S. ROSYAL / B. BROOKS Contact: _____
 Company: MWH Company: _____
 Address: JOLIET FIELD OFFICE Address: _____
 Phone: 815-423-6841 Phone: _____
 Fax: _____ Fax: _____
 E-Mail: _____ PO#: _____ Quote: _____

Lab Lot# 250378

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>3.3</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	Res Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Preserv	Refr #	# / Cont.	Volume	Preserv
			Date	Time							
		JPL2-AP94(D.S)	3/13/07	1200	S	G	X				

Additional Analyses / Remarks

2 DATA
WD: 023
BDA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 3/13/07 TIME 1400 RECEIVED BY [Signature] COMPANY STL DATE 3/13/07 TIME 1400

RELINQUISHED BY [Signature] COMPANY _____ DATE _____ TIME _____ RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WL = Wipe
 - O =
- Container Key**
1. Plastic
 2. WOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 3, 13, 07

Courier: STL Hand Delivered

Bill of Lading

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250378 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 03/13/2007 Date of the Report.: 03/15/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: PCW
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?... Y
 Custody seal on shipping container?..... N
 ...If "yes", custody seal intact?.....
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 3.3
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample label(s)?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?... N
 Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago
 2417 Bond Street *COE: 031307A*
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

BRI To:

Shaded Areas For Internal Use Only 1 of 1

Contact: *S. Rosypal / B. Brooks*
 Company: *MWH Field Office*
 Address: _____
 Phone: *815-423-6841*
 Fax: *Suzanne.Rosypal@*
 E-Mail: *mwhglobal.com*

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Lab Lot# *250380*

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <i>3.4</i>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	Res Cl ₂ Check OK Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present <input type="checkbox"/>	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCN	PCB	VOC (TCLP)	SVOC (TCLP)	RCRA Metals (TCLP)	Reactivity	Ignitability	B330	Paint Filter	Corrosivity	Total Pherals	Additional Analyses / Remarks
			Date	Time														
<i>1</i>		<i>JPLS-PCN Profile</i>	<i>3/13/07</i>	<i>0900</i>	<i>S</i>	<i>C</i>	<input checked="" type="checkbox"/>	<i>JOAAP LAP</i> <i>BOA 40116 WD 023</i> <i>TAT: 5 day</i>										

RELINQUISHED BY *[Signature]* COMPANY *MWH* DATE *3/13/07* TIME *1060*

RECEIVED BY *[Signature]* COMPANY *STL* DATE *3/13/07* TIME *1400*

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - W = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS
Follow LCG

Date Received *3, 13, 07*
 Courier: *STL* Hand Delivered
 Bill of Lading

SEVERN TRENT STL

STL Chicago COC: 031407
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: S. ROYAL / R. BLOOM
 Company: MWH
 Address: FULTON FIELD OFFICE
 Phone: 815-423-6841
 E-Mail:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Lab Lot# 250387

Package Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Sealed Yes <input type="radio"/> No <input checked="" type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input type="radio"/>
Temperature °C of Cooler 4.0	
Within Hold Time Yes <input checked="" type="radio"/> No <input type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input type="radio"/> NA
pH Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA	Res Cl ₂ Check OK Yes <input type="radio"/> No <input checked="" type="radio"/> NA
Sample Labels and COC Agree Yes <input checked="" type="radio"/> No <input type="radio"/> COC not present	
Additional Analyses / Remarks	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	C4	Refr #	# / Cont	Volume	Preserv
			Date	Time							
1	X	JPL2-AP95 (0.5)	3/14/07	1200	S	G	X				
2	X	↓ AP96 (0.5)	↓	1205	S	G	X				
3		JPL2-AP95-D (0.5)	3/14/07	1200	S	G	X				
4		↓ AP96-D (0.5)	↓	1205	S	G	X				

2 DAY TAT
 W.D.: 023
 BDA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 3/14/07 TIME: 1609

RECEIVED BY: [Signature] COMPANY: STL DATE: 3/14/07 TIME: 1448

Matrix Key
 WW = Wastewater SE = Sediment
 W = Water SO = Sols
 S = Soil DS = Drum Solid
 SL = Sludge DL = Drum Liquid
 MS = Miscellaneous L = Leachate
 OL = Oil WI = Wipe
 A = Air O =

Container Key
 1. Plastic
 2. WOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 3, 14, 07
 Courier: STL Hand Delivered
 Bill of Lading

STL Chicago

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250387 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 03/14/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MMH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 03/16/2007
 Project Manager.....: rcw

Questions ? (Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?.. Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?.. N

Sample Custodian signature/Data..... Y

**SEVERN
TRENT** **STL**

STL Chicago Loc: 031507A
2417 Bond Street
University Park, IL 60466
Phone: 708-534-3200
Fax: 708-534-3211

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only L of 1

Contact: S. Ruppel / B. Brooks
Company: MWH
Address: DOUET FIELD OFFICE
Phone: 615-423-6641
Fax: _____
E-Mail: _____

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

Lab Lot# 500-32112

Package Sealed
Yes No Samples Sealed
Yes No

Received on Ice
Yes No Samples Intact
Yes No

Temperature °C of Cooler
4.3

Sampler Name: Ryan Young Signature: [Signature]
Project Name: LAP SOIL Project Number: _____
Project Location: _____ Date Required: _____
Lab PM: _____ Hard Copy: _____
Fax: _____

Refrg #	# / Cont.	Volume	Preserv

Within Hold Time
Yes No Preserv. Indicated
Yes No NA

pH Check OK
Yes No NA Res Cl₂ Check OK
Yes No NA

Sample Labels and COC Agree
Yes No COC not present
Yes No

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Cd	TOTAL Pb	Ag	As	Zn	Cu
			Date	Time								
1		JPL2 - AP97 (0.5)	3/15/07	1220	S	G	X	X	X	X	X	X
2	X	AF44 (2)	↓	1225	S	G	X	X	X	X	X	X
3	X	AF45 (2)	↓	1230	S	G	X	X	X	X	X	X

Additional Analyses / Remarks

2 DAY TAT
WD: 023
BOA: 4816

RELINQUISHED BY [Signature] COMPANY MWH DATE 3/15/07 TIME 1400

RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____

RECEIVED BY [Signature] COMPANY STL DATE 3/15/07 TIME 1530

RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

- Matrix Key**
WW = Wastewater SE = Sediment
W = Water SO = Solid
S = Soil DS = Drum Solid
SL = Sludge DL = Drum Liquid
MS = Miscellaneous L = Leachate
OL = Oil WL = Wipe
A = Air O = _____
- Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other: _____
- Preservative Key**
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received 3 / 15 / 07

Courier: 92 Hand Delivered: X

Bill of Lading _____

Job No: 250399

Client: JPAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1, 2, 3	% Sol	[Signature]	coolan 2	3/13/07	1800	
4, 2, 3		[Signature]	[Signature]			
1, 2, 3	metals	[Signature]	[Signature]	3/14/07	0830	
1-3		[Signature]	[Signature]			
1-3	metals	Paul J. Tolant	[Signature]	3/16/07	1350	

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250399 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 03/15/2007 Date of the Report.: 03/28/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?... N
- Sample Custodian Signature/Date..... Y



STL

STL Chicago **WC: 021507 B**
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: _____ BSI To: SALE Excluded Areas Per Internal Use Only _____ of _____

Contact: S. Kowal / B. B. Brown Contact: _____
 Company: WWT Company: _____
 Address: 1001 WEST 74TH ST CHICAGO IL 60656 Address: _____
 Phone: 616-423-6601 Phone: _____
 Fax: _____ Fax: _____
 E-Mail: _____ PO#: _____ Quote: _____

Lab Lot# 25037400

Package Sealed: Yes No Samples Sealed: Yes No
 Received on Ice: Yes No Samples Intact: Yes No
 Temperature, °C of Cooler: 43

W/In Hold Time: Yes No Preserv. Indicated: Yes No NA
 pH Check OK: Yes No Res Cl₂ Check OK: Yes No NA
 Sample Labels and CDC Agree: Yes No CDC not present:

Additional Analyses / Remarks

Sampler Name:		Signature:		Refug #		# / Case		Vol Lab		Process	
Project Name:		Project Number:		Date Required		Hard Copy:		MARS		Comp/Grab	
Project Location:		Lab Pkt:		Date		Time		Date		Time	
Laboratory ID	MIS-MSD	Client Sample ID	Date	Time	MARS	Comp/Grab	Flow	Gate	Temp	Time	Time
		<u>JPL2-CPTANK (CS)</u>	<u>3/15/07</u>	<u>1215</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>X</u>			

W/In Hold Time: Yes No
 Preserv. Indicated: Yes No NA
 pH Check OK: Yes No
 Res Cl₂ Check OK: Yes No NA
 Sample Labels and CDC Agree: Yes No
 CDC not present:
 Additional Analyses / Remarks

S DAY TH
NO: 623
SOA: 4216

RELINQUISHED BY: [Signature] COMPANY: WWT DATE: 3/15/07 TIME: 1400 RECEIVED BY: [Signature] COMPANY: STL DATE: 3/15/07 TIME: 1530

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - C = Oil
 - A = Air
 - SE = Sediment
 - SC = Solid
 - CS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Waste
 - O =

- Container Key**
- 1. Plastic
 - 2. VCA Vial
 - 3. Sterile Plastic
 - 4. Amber Glass
 - 5. Widemouth Glass
 - 6. Other

- Preserve Use Key**
- 1. F01, Cool to 4°
 - 2. F204, Cool to 4°
 - 3. FROS, Cool to 4°
 - 4. NaOH, Cool to 4°
 - 5. NaOH/Zn, Cool to 4°
 - 6. Cool to 4°
 - 7. None

COMMENTS

Date Received: 3/15/07
 Courier: STL Hand Delivered:
 Bill of Lading: _____

Job Number.: 250400 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 03/15/2007 Date of the Report.: 06/23/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?..	Y	
Custody seal on shipping container?.....	N	
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2). Y	4.3	
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..	N	
Sample Custodian Signature/Date.....	Y	

SEVERN TRENT

STL

STL Chicago (OC): 031507C
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: _____ **Bill To:** SAME **Shaded Areas For Internal Use Only** 1 of 1

Contact: S. Risy part / B. Blooms **Contact:** _____
Company: MWH **Company:** _____
Address: JOLIET FIELD OFFICE **Address:** _____
Phone: 815-423-6841 **Phone:** _____
Fax: _____ **Fax:** _____
E-Mail: _____ **PO#:** _____ **Quote:** _____

Lab Lot# 250401

Package Sealed Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>
Temperature °C of Cooler 4.3	

Sampler Name:		Signature:		Refrg #															
Project Name:		Project Number:		Volume															
Project Location:		Date Required		Preserv															
Lab PM:		Hard Copy:		Matrix	Comp/Grab														
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab													
1		JPL2-SP1(O)	3/15/07	1200	S	G	Y												
2		↓ SP2(O)	↓	1205	↓	↓	X												
3		↓ SP3(O)	↓	1210	↓	↓	Y												

Within Hold Time
Yes No

Preserv. Indicated
Yes No NA

pH Check OK
Yes No NA

Res Cl₂ Check OK
Yes No NA

Sample Labels and COC Agree
Yes No COC not present

Additional Analyses / Remarks

2 DAY TAT

WD:023

BD4:401L

RELINQUISHED BY: *[Signature]* COMPANY: MWH DATE: 3/15/07 TIME: 1400 RECEIVED BY: *[Signature]* COMPANY: *[Signature]* DATE: 3/15/07 TIME: 1530

RELINQUISHED BY: _____ COMPANY: _____ DATE: _____ TIME: _____ RECEIVED BY: _____ COMPANY: _____ DATE: _____ TIME: _____

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solids
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 Wl = Wipe
 O = _____

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 3/15/07

Courier: STL **Hand Delivered**

Bill of Lading

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250401 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 03/15/2007 Date of the Report...: 03/30/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MMH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between CDC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?... N
- Sample Custodian signature/Date..... Y

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250415 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 03/19/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 03/21/2007
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... Y
- ...if "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...if "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 3.6c
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace)..... Y
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required? Y
- If samples were shipped was there an air bill #?.. Y
- Sample Custodian Signature/Date..... Y

**SEVERN
TRENT**

STL

STL Chicago **COC: 032007**
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Bill To: **CAME**

Shaded Areas For Internal Use Only 1 of 1

Contact: **S. P. S. / B. BROOKS**
 Company: **MWH**
 Address: **LOWER FIELD OFFICE**
 Phone: **815-423-6841**
 Fax:
 E-Mail:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#:

Lab Lot# **250418**

Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature °C of Cooler 3.5	

Sampler Name: **R. V. YOUNG**
 Signature: *[Signature]*
 Project Name: **LAPSOFL**
 Project Number:
 Project Location:
 Lab PM:
 Date Required:
 Hard Copy:
 Fax:

Refr #	# / Cont.	Volume	Preserv

Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
pH Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Res Cl ₂ Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Sample Labels and COC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	8330	Cu	Zn	As	Cd	TOTAL Pb	Ag
			Date	Time									
1		JPL2-SP4(1)	3/20/07	1100	S	G	X						
2		AF49 (2)		1105				X	X	X	X	X	X
3		AF50 (3)		1110						X			
4		AP100 (0.5)		1115				X	X	X	X	X	X

Additional Analyses / Remarks

2 DAY TAT

WD: 023

BDA: 4018

RELINQUISHED BY: *[Signature]* COMPANY: **MWH** DATE: **3/20/07** TIME: **1400**

RECEIVED BY: *[Signature]* COMPANY: **STL** DATE: **3/20/07** TIME: **1526**

Matrix Key

WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = A*

SE = Sediment
 SC = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WL = Wipe
 O =

Container Key

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key

1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received: / /

Courier: Hand Delivered **STL Chicago**

Bill of Lading

rpjsckl	Job Sample Receipt Checklist Report			V2
Job Number.: 250418	Location.: 57222	Check List Number.: 1	Description.:	Date of the Report...: 03/22/2007
Customer Job ID.....:	Project Description.: JOAAP: LAP	Job Check List Date.: 03/20/2007		Project Manager.....: rcw
Project Number.: 20005627	Customer.....: MMH Americas, Inc.	Contact.: Brigid Brooks		
Questions ?	(Y/N)	Comments		
Chain-of-Custody Present?.....	Y			
Were samples dropped off at or picked up by STL?..	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples iced?.....	Y			
Temperature of cooler acceptable? (4 deg C +/- 2)-	Y	3.5c		
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....	Y			
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Radioactivity at or below background levels?.....	Y			
A Sample Discrepancy Report (SDR) was needed?.....	N			
Residual Chlorine Check Required?	Y			
If samples were shipped was there an air bill #?..	Y			
Sample Custodian Signature/Date.....	Y			

**SEVERN
TRENT** **STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. WYAL / B. BRADY
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: 815-422-6841
Fax: _____
E-Mail: _____

Bill To:

same

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 250429

Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature: <u>25</u> °C of Cooler	
Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
pH Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Res. Cl. Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Sample Labels and CDC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA CDC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	CY	ZN	Ref. #	A. Com.	Volume	Preserv.
			Date	Time								
1		JPL2-API01(0.5)	3/26/07	1300	S	G	X					
2		API02(0.5)		1305			X					
3		AF51(3)		1310			X	X				
4		API01(0.5)-D		1300			X					
5		AF51(3)-D		1310	✓	✓	X	X				

Additional Analyses / Remarks

2 DAY TAT

WD: 023

BDA: 401A

RELINQUISHED BY [Signature] COMPANY MWH DATE 3/26/07 TIME 1400

RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____

RECEIVED BY [Signature] COMPANY SR DATE 03/26/07 TIME 1200

RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

Matrix Key

WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
QL = Oil
A = Air

SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
D = _____

Container Key

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key

1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received 03/26/07

Courier: _____ Hand Delivered [Signature]

Bill of Lading _____

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250431 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 03/27/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Date of the Report.: 03/27/2007
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks Project Manager.....: rcw

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?.. N
- Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago 033007
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Bill To:

Shaded Areas For Internal Use Only 2 of 1

Contact: S. Rosypal / B. Brooks
 Company: MWH
 Address: _____
 Phone: 815-423-6841
 Fax: _____
 E-Mail: _____

Contact: Same
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Lab Lot# 2504B
 Package Sealed: Yes No
 Samples Sealed: Yes No
 Received on Ice: Yes No
 Samples Intact: Yes No
 Temperature °C of Cooler: 4.0

Sampler Name: Jared Schmidt Signature: [Signature]
 Project Name: LAP-SOIL Project Number: _____
 Project Location: _____ Date Required: _____
 Lab PM: _____ Hard Copy: _____
 Fax: _____

Withr Hold Time: Yes No
 Preserv. Indicated: Yes No
 pH Check OK: Yes No
 Res Cl₂ Check OK: Yes No
 Sample Labels and COC Agree: Yes No
 COC not present

Laboratory ID	MIS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Cd	Pb	Ag	As	Zn	Cu	Additional Analyses / Remarks
			Date	Time									
1		JPL2-API05(0.5)	3/30/07	845	S	G	✓	✓	✓	✓	✓	✓	2 DAY TAT
2		API06(0.5)		850			✓	✓	✓	✓	✓	✓	
3		API07(0.5)		855			✓	✓	✓	✓	✓	✓	BOA 4016
4		AP 108(0.5)		915			✓	✓	✓	✓	✓	✓	WO 023
5		JPL2-AF54(2)		900			✓	✓	✓	✓	✓	✓	
6		AF 55(2)		905			✓	✓	✓	✓	✓	✓	
7		AF 56(2)		910			✓	✓	✓	✓	✓	✓	

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 3/30/07 TIME: 12:30

RECEIVED BY: [Signature] COMPANY: STL DATE: 3/30/07 TIME: 1:320

Matrix Key
 WW = Wastewater SE = Sediment
 W = Water SO = Solid
 S = Soil DS = Drum Solid
 SL = Sludge DL = Drum Liquid
 MS = Miscellaneous L = Leachate
 OL = Oil Wt = Wipe
 A = Air O = _____

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: _____
 Courier: STL Hand Delivered
 Bill of Lading

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250443 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 03/30/2007 Date of the Report...: 04/02/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: RCW
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?... Y	Y	
Custody seal on shipping container?.....	Y	
...If "yes", custody seal intact?.....	Y	
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples iced?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0	Y	
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between CDC and sample labels?.....	Y	
Radioactivity at or below background levels?.....	Y	
A Sample Discrepancy Report (SDR) was needed?.....	N	
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?..		
Sample Custodian Signature/Date.....	Y	

**SEVERN
TRENT
STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: S. ROSYPAL | B. BROOKS
Company: MWH
Address: JOLIET FIELD OFFICE
Phone: 815-423-6841
Fax:
E-Mail:

Contact:
Company:
Address:
Phone:
Fax:
PO#:

Lab Lot# 250472
Package Sealed: Yes (No)
Samples Sealed: Yes (No)
Received on Ice: Yes (No)
Samples Intact: Yes (No)
Temperature °C of Cooler: 4.2

Sampler Name: RYAN YOUNG
Signature: [Signature]
Project Name: LAP SOILS
Project Number:
Project Location:
Date Required:
Hard Copy: / /
Lab PM:
Fax: / /

Within Hold Time: Yes (No)
Preserv. Indicated: Yes (No) NA
pH Check OK: Yes (No) NA
Res Cl₂ Check OK: Yes (No) NA

Matrix: Matrix / Comp/Grab
C₄ Total Pb
As Zn Ba Ni Pb TCUP Cr Sb

Sample Labels and CDC Agree: Yes (No)
CDC not present

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	C ₄	Total Pb	As	Zn	Ba	Ni	Pb TCUP	Cr	Sb
1		JPL23A-AF1(6)	4/5/07	1000	S	Q	X	X	X	X	X	X		X	X
2	X	AP1(1)		1005			X	X	X	X	X	X	X	X	X
3		AP2(4)		1010			X	X	X	X	X	X		X	X
4		AP3(1)		1015			X	X	X	X	X	X		X	X
5	X	AP4(4)		1020			X	X	X	X	X	X		X	X
6		AP2(4)-D		1010			X	X	X	X	X	X		X	X
7		AP3(1)-D		1015			X	X	X	X	X	X		X	X

Additional Analyses / Remarks
2 DAY TAT
WD: 023
BOA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 4/5/07 TIME: 1:40

RECEIVED BY: [Signature] COMPANY: STL DATE: 4-5-07 TIME: 1:00

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
Q =

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Wide-mouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received: 4.5.07
Courier: STL Hand Delivered
Bill of Lading

SIL Chicago
 Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 250472

Client: JOAN P

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
1-7	digestion to ICP	Lina Peckles	T. Cook	4/6/07	1500	
1-7	ICP	T. Cook	RMS-197	4/7/07	08:00	

SIL Chicago
Intra-Laboratory Internal Sample Custody Transfer Record

Job No: 250472

Client: JGAP

Sample No.	Analysis	Relinquished by:	Received by:	Date	Time	Comments
2	digestion to ICP	Lisa Peebles	J. Smith	4/6/07	1500	
2	ICP	T. G. M.	Ken S. (FH)	4/6/07	11:30	

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250472 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 04/05/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks
 Date of the Report...: 04/06/2007
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?... Y
 Custody seal on shipping container?..... N
If "yes", custody seal intact?..... N
 Custody seals on sample containers?..... N
If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.2
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?... N
 Sample Custodian Signature/Date..... Y

rpjsckt

Job Sample Receipt Checklist Report

V2

Job Number.: 250473 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 04/05/2007 Date of the Report...: 04/06/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MHH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2)... Y 4.3
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?... N
- Sample Custodian signature/Date..... Y



STL

STL Chicago
 2417 Bond Street **COZ. 040607**
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: _____ **Bill To:** SAME **Shaded Areas For Internal Use Only** 1 of 1

Contact: S. Pappas / B. Brooks Contact: _____
 Company: MWH Company: _____
 Address: Lower Field Office Address: _____
 Phone: _____ Phone: _____
 Fax: _____ Fax: _____
 E-Mail: _____ PO#: _____ Quote: _____

Lab Lot# 250479

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Sample Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature: C of Cooler <u>34</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Presery. Indicated Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	Res. Cl. Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>
Sample Labels and CDC tags Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> CDC not present	

Sampler Name: RYAN YOUNG **Signature:**

Project Name: LAPSOIL **Project Number:** _____

Project Location: _____ **Date Required:** _____

Lab PM: _____ **Hard Copy:**

Fax:

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Analytes									
			Date	Time			Cu	TOTAL Pb	As	Zn	Ba	Ni	Cr	Sb		
1		JPL23A-ADS (1)	4/6/07	1100	S	G	X	X	X	X	X	X	X	X	X	
2		↓ AP6 (4)	↓	1105	↓	↓	X	X	X	X	X	X	X	X	X	
3		↓ AF2 (6)	↓	1110	↓	↓	X	X	X	X	X	X	X	X	X	
4		↓ APS (1)-D	↓	1100	↓	↓	X	X	X	X	X	X	X	X	X	

Additional Analyses / Remarks

2 DAY TAT

WO: 023

BOA: 4016

RELINQUISHED BY COMPANY MWH DATE 4/6/07 TIME 1300 RECEIVED BY COMPANY STL DATE 4/6/07 TIME 1300

RELINQUISHED BY COMPANY _____ DATE _____ TIME _____ RECEIVED BY COMPANY _____ DATE _____ TIME _____

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O = _____
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 4, 6, 07

Courier: STL Hand Delivered

Bill of Lading _____

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250479 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 04/06/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report...: 04/26/2007
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y

Were samples dropped off at or picked up by STL?... Y

Custody seal on shipping container?..... N

...If "yes", custody seal intact?.....

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples iced?..... Y

Temperature of cooler acceptable? (4 deg C +/- 2). Y 3.4

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace).....

Correct containers used?..... Y

Adequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Radioactivity at or below background levels?..... Y

A Sample Discrepancy Report (SDR) was needed?..... N

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?... N

Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Rosypal/B. Brooks
Contact: _____
Company: MWH
Address: _____
Phone: 815-423-6841
Fax: _____
E-Mail: _____

Bill To: same
Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ **Quote:** _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 250483

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name: <u>Suzanne Schmidt</u>		Signature: <u>[Signature]</u>		Refry #																			
Project Name: <u>LAP Soils</u>		Project Number:		Yokimo																			
Project Location:		Date Required		Preserv																			
Lab PM:		Hard Copy: <u> </u> <u> </u> <u> </u>		Matrix		Comp/Grab		Pb		Cu		Zn		As		Sb		Ba		Cr		Ni	
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	Pb	Cu	Zn	As	Sb	Ba	Cr	Ni									
1		JPL23A-AP7(1)	4/9/07	1250	S	G	✓	✓	✓	✓	✓	✓	✓	✓									
2		AP8(4)		1255	S	G	✓	✓	✓	✓	✓	✓	✓	✓									
3		AP9(1)		1300	S	G	✓	✓	✓	✓	✓	✓	✓	✓									
4		AP10(4)		1305	S	G	✓	✓	✓	✓	✓	✓	✓	✓									
5		JPL23A-AF3(6)	4/9/07	1310	S	G	✓	✓	✓	✓	✓	✓	✓	✓									

Additional Analyses / Remarks

BOA: 4016
 WO: 023
 2 day TAT

RELINQUISHED BY <u>[Signature]</u>	COMPANY <u>must</u>	DATE <u>4/9/07</u>	TIME <u>1600</u>	RECEIVED BY <u>[Signature]</u>	COMPANY <u>STL</u>	DATE <u>4/9/07</u>	TIME <u>1600</u>
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

- | | | |
|--|---|--|
| Matrix Key | Container Key | Preservative Key |
| WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
CL = Cl ⁻
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____ | 1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other | 1. HCl, Cool to 4°
2. #2SD4, Cool to 4°
3. #ND3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None |

COMMENTS

Date Received 4/9/07

Courier: STL **Hand Delivered** [Signature]

Bill of Lading

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250483 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 04/09/2007 Date of the Report...: 04/10/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Contact.: Brigid Brooks
 Customer.....: MVH Americas, Inc.

Questions ?

(Y/N) Comments

Chain-Of-Custody Present?..... Y
 Were samples dropped off at or picked up by STL?... Y
 Custody seal on shipping container?..... Y
 ...If "yes", custody seal intact?..... Y
 Custody seals on sample containers?..... N
 ...If "yes", custody seal intact?.....
 Samples iced?..... Y
 Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
 Samples received intact (good condition)?..... Y
 Volatile samples acceptable? (no headspace).....
 Correct containers used?..... Y
 Adequate sample volume provided?..... Y
 Samples preserved correctly?..... Y
 Samples received within holding-time?..... Y
 Agreement between COC and sample labels?..... Y
 Radioactivity at or below background levels?..... Y
 A Sample Discrepancy Report (SDR) was needed?..... N
 Residual Chlorine Check Required?
 If samples were shipped was there an air bill #?...
 Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only of

Contact: S. POLYMER / B. BROOKS
Company: MWH
Address: JOAAP
Phone: 815-423-6241
Fax:
E-Mail:

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Lab Lot# 250504

Backfree Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Preserv. Indicated Yes No NA
pH Check OK Yes No NA	Res. Cl. Check OK Yes No NA
Sample Labels and COC Agree Yes No COC not present	

Sampler Name: RYAN YOUNG Signature: [Signature]
Project Name: LAP SOIL Project Number:
Project Location: Date Required
Lab PMI: Hard Copy: Fax:

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cu	Zn	As	Sb	Ba	Cr	Ni
			Date	Time										
1		JPL23A-API1(1)	4/14/07	830	S	G	X	X	X	X	X	X	X	X
2		AP12(4)		835			X	X	X	X	X	X	X	X
3		AP13(1)		840			X	X	X	X	X	X	X	X
4		AP14(4)		848			X	X	X	X	X	X	X	X
5		AF4(6)		850			X	X	X	X	X	X	X	X
6		AP13(1)-D		840			X	X	X	X	X	X	X	X

Additional Analyses / Remarks
2 DAY TAT
WO: 023
BDA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 4/16/07 TIME 1340 RECEIVED BY [Signature] COMPANY STL DATE 4/16/07 TIME 1440

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - D =
- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other
- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: / /

Courier: STL Hand Delivered: [Signature]

Bill of Lading

rpjckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250504 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 04/16/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Date of the Report.: 04/30/2007
 Project Manager.....: rcw

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?..
- Sample Custodian Signature/Date..... Y

Job Number.: 250523 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 04/20/2007 Date of the Report.: 05/04/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: RCW
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

- Chain-of-Custody Present?..... Y
- were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... Y
-If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
-If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample Labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?..
- Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago 606.0423 07
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: E-POSYPAL B. Brooks
 Company: MWH
 Address: JONAH
 Phone: 615-423-6841
 Fax: _____
 E-Mail: _____

Bill To:

CAME

Contact: _____
 Company: _____
 Address: _____
 Phone: _____
 Fax: _____
 PO#: _____ Quote: _____

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 250534

Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature (°C) of Cooler <u>4.0</u>	
Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
pH Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Res Cl. Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Sample Labels and COC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name:		Signature:		Refrig #															
<u>Ryan Young</u>		<u>[Signature]</u>																	
Project Name:		Project Number:		Volume															
<u>LH-22</u>																			
Project Location:		Date Required		Matrix	Comp/Grab														
Lab PM:		Hard Copy: <u> </u> <u> </u> <u> </u>																	
		Fax: <u> </u> <u> </u> <u> </u>																	
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time															
<u>1</u>		<u>JPL 23A - AP21 (i)</u>	<u>4/23/07</u>	<u>1200</u>	<u>S</u>	<u>G</u>	<u>X</u>												
<u>2</u>		<u>AP 22 (4)</u>	<u> </u>	<u>1205</u>	<u> </u>	<u> </u>	<u>X</u>												
<u>3</u>		<u>AP 8 (6)</u>	<u> </u>	<u>1210</u>	<u> </u>	<u> </u>	<u>X</u>												
<u>4</u>		<u>AP 8 (6) - D</u>	<u> </u>	<u>1210</u>	<u> </u>	<u> </u>	<u>X</u>												

Additional Analyses / Remarks

2 DAY TAT

WO: 023

BDA: 4014

RELINQUISHED BY <u>[Signature]</u> COMPANY <u>MWH</u> DATE <u>4/23/07</u> TIME <u>1:00</u>	RECEIVED BY <u>[Signature]</u> COMPANY <u>SZ</u> DATE <u>4/23/07</u> TIME <u>10:00</u>
RELINQUISHED BY _____ COMPANY _____ DATE _____ TIME _____	RECEIVED BY _____ COMPANY _____ DATE _____ TIME _____

Matrix Key

WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air

SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O = _____

Container Key

1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key

1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received

Courier: Hand Delivered

Bill of Lading

STL Chicago

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250534 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 04/23/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Date of the Report.: 04/24/2007
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks Project Manager.....: rcw

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?...
- Sample Custodian Signature/Date..... Y

SEVERN TREN T STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

COC: 042407

Report To:

Contact: S. ROSYPAL / B. BROOKS
 Company: MWH
 Address: TDAP
 Phone: 815-423-6841
 Fax:
 E-Mail:

Bill To: SAWE

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 250536

Package Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler: <u>4.0</u>	

Sampler Name: RYAN YOUNG
 Project Name: LAP SOIL
 Project Location:
 Lab PM:

Signature: [Signature]
 Project Number:
 Date Required:
 Hard Copy:
 Fax:

Refr #	# / Cont.	Volume	Preserv.	Matrix	Comp/Grab	Pb	Sb	Zn	Ba	Cr

With Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>	Res Cl. Check OK Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Sample Labels and COC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	Comp/Grab	Pb	Sb	Zn	Ba	Cr
1		JPL23A-AP23(1)	4/24/07	1100	S	G	X	X	X	X	X
2		AP24(4)		1105			X	X	X	X	X
3	X	AP25(1)		1110			X	X	X	X	X
4		AP26(4)		1115			X	X	X	X	X
5		AP27(1)		1120			X	X	X	X	X
6		AP28(4)		1125			X	X	X	X	X
7	X	AP29(1)		1130			X	X	X	X	X
8		AP30(4)		1135			X	X	X	X	X
9		AF9(6)		1140	✓	✓	X	X	X	X	X

Additional Analyses / Remarks

2 DAY TAG

WD: 023

BOA: 4016

RELINQUISHED BY [Signature] COMPANY MWH DATE 4/24/07 TIME 1400

RECEIVED BY [Signature] COMPANY STL DATE 4/24/07 TIME 1600

- | | | |
|---|--|---|
| Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = | Container Key
1. Plastic
2. WOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth: Glass
6. Other | Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None |
|---|--|---|

COMMENTS

Date Received 4, 24, 07

Courier: STL Hand Delivered

Bill of Lading

rpj/sckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250536 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 04/24/2007 Date of the Report...: 04/30/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?.. N
- Sample Custodian Signature/Bate..... Y

**SEVERN
TRENT STL**

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Contact: S. Young / B. Brown
Company: MWA
Address: SPAW
Phone: 815-423-6844
Fax:
E-Mail:

BILL TO: same

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 25052372

Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature °C of Cooler <u>4.0</u>	
Wet Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
all Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Res. Cl. Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Sample Labels and CDC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> CDC not present	

Sampler Name: RYAN YOUNG
Project Name: LAPSOU
Project Location:
Lab PM:

Signature: [Signature]
Project Number:
Date Required:
Hard Copy:
Fax:

Matrix	Comp/Grab	Cu	Pb	As	Sb	Zn	Ba	Ni	Cr
--------	-----------	----	----	----	----	----	----	----	----

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Cu	Pb	As	Sb	Zn	Ba	Ni	Cr	Additional Analyses / Remarks
			Date	Time											
<u>1</u>		<u>JPL23A-AP15(1)</u>	<u>4/20/07</u>	<u>1100</u>	<u>S</u>	<u>G</u>	<u>X</u>	<u>Z PAV TAR</u>							
<u>2</u>		<u>AP16(4)</u>		<u>1105</u>			<u>X</u>								
<u>3</u>		<u>AP17(1)</u>		<u>1110</u>				<u>X</u>	<u>WQ: 023</u>						
<u>4</u>		<u>AP18(4)</u>		<u>1115</u>			<u>X</u>								
<u>5</u>		<u>AP19(1)</u>		<u>1120</u>			<u>X</u>	<u>BOA: 406</u>							
<u>6</u>		<u>AP20(4)</u>		<u>1125</u>			<u>X</u>								
<u>7</u>		<u>AF5(6)</u>		<u>1130</u>			<u>X</u>								
<u>8</u>		<u>AF6(6)</u>		<u>1135</u>			<u>X</u>								
<u>9</u>		<u>AF7(5)</u>		<u>1140</u>			<u>X</u>								
<u>10</u>		<u>JPL23A-AP17(10)</u>		<u>1110</u>	<u>S</u>	<u>G</u>	<u>X</u>		<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	

RELINQUISHED BY: [Signature] COMPANY: MWA DATE: 4/20/07 TIME: 1699
 RECEIVED BY: [Signature] COMPANY: STL DATE: 4/20/07 TIME: 1900

- Matrix Key**
- WW - Wastewater
 - W - Water
 - S - So.
 - SL - Sludge
 - MS - Miscellaneous
 - OL - Oil
 - A - Air
 - SE - Sediment
 - SO - Solid
 - DS - Drum Solid
 - DL - Drum Liquid
 - L - Leachate
 - WI - Wipe
 - O -

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wigmouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: 1/1
 Courier: STL Hand Delivered
 Bill of Lading

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250541 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 04/25/2007 Date of the Report...: 04/30/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

Chain-of-Custody Present?..... Y RELOG

Were samples dropped off at or picked up by STL?..

Custody seal on shipping container?.....

...If "yes", custody seal intact?.....

Custody seals on sample containers?.....

...If "yes", custody seal intact?.....

Samples iced?.....

Temperature of cooler acceptable? (4 deg C +/- 2).

Samples received intact (good condition)?.....

Volatile samples acceptable? (no headspace).....

Correct containers used?.....

Adequate sample volume provided?.....

Samples preserved correctly?.....

Samples received within holding-time?.....

Agreement between COC and sample labels?.....

Radioactivity at or below background levels?.....

A Sample Discrepancy Report (SBR) was needed?.....

Residual Chlorine Check Required?

If samples were shipped was there an air bill #?..

Sample Custodian signature/date.....

rpjckkl

Job Sample Receipt Checklist Report

VZ

Job Number.: 250523 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 04/20/2007 Date of the Report...: 05/10/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Contact.: Brigid Brooks
 Customer.....: MMH Americas, Inc.

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?.. Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?..
- Sample Custodian Signature/Date..... Y

**SEVERN
TRENT**

STL

STL Chicago
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

BRI To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: S. Pappalardo B. Brooks
Company: MWH
Address: 10244
Phone: 815-423-6041
Fax:
E-Mail:

Contact:
Company:
Address:
Phone:
Fax:
PO#: Quote:

Lab Lot# 500² 250548

Package Sealed: Yes No
Samples Sealed: Yes No

Received on Ice: Yes No
Samples Intact: Yes No

Temperature °C of Cooler: 4.2

Within Hold Time: Yes No
Preserv. Indicated: Yes No NA

pH Check OK: Yes No NA
Res Cl. Check OK: Yes No NA

Sample Labels and COC Agree: Yes No
COC not present

Sampler Name: RYAN YOUNG
Signature: [Signature]
Project Name: LAP SOIL
Project Number:
Project Location:
Date Required:
Lab PM: Hard Copy: Fax:

Matrix	Comp/Grab	TOTAL PL	PL T2LP
S	G	X	X
		X	X
		X	X
		X	X
		X	X

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	TOTAL PL	PL T2LP
			Date	Time				
1		JPM12-STOCKPILE-1(0)	4/26/07	1100	S	G	X	X
2		↓ 2(0)	↓	1105	↓	↓	X	X
3		↓ 3(0)	↓	1110	↓	↓	X	X
4		↓ 4(0)	↓	1115	↓	↓	X	X
5		↓ 5(0)	↓	1120	↓	↓	X	X

Additional Analyses / Remarks

2 DAY TAT

WO = 023

BOA = 404

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 4/26/07 TIME: 1900

RECEIVED BY: [Signature] COMPANY: SR DATE: 4/26/07 TIME: 1500

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O =

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received: 4/26/07
Courier: STL Hand Delivered
Bill of Lading

STL Chicago

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 250548 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 04/26/2007 Date of the Report...: 04/30/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.2
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?... N
- Sample Custodian Signature/Date..... Y

rpjsckl Job Sample Receipt Checklist Report			V2
Job Number.: 250551	Location.: 57222	Check List Number.: 1	Description.:
Customer Job ID.....:		Job Check List Date.: 04/27/2007	Date of the Report...: 04/30/2007
Project Number.: 20005627	Project Description.: JDAAP: LAP		Project Manager.....: rcw
Customer.....: MWH Americas, Inc.	Contact.: Brigid Brooks		
Questions ?	(Y/N)	Comments	
Chain-of-Custody Present?.....	Y		
Were samples dropped off at or picked up by STL?.. Y			
Custody seal on shipping container?.....	N		
...If "yes", custody seal intact?.....			
Custody seals on sample containers?.....	N		
...If "yes", custody seal intact?.....			
Samples iced?.....	Y		
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0			
Samples received intact (good condition)?.....	Y		
Volatile samples acceptable? (no headspace).....			
Correct containers used?.....	Y		
Adequate sample volume provided?.....	Y		
Samples preserved correctly?.....	Y		
Samples received within holding-time?.....	Y		
Agreement between COC and sample labels?.....	Y		
Radioactivity at or below background levels?.....	Y		
A Sample Discrepancy Report (SDR) was needed?.....	N		
Residual Chlorine Check Required?			
If samples were shipped was there an air bill #?.. N			
Sample Custodian Signature/Date.....	Y		

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: S. Rosypal / B. Brooks
 Company: MWH
 Address: BDA
 Phone: 815-423-6841
 Fax:
 E-Mail:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Lab Lot# 250557

Package Sealed Yes No	Samples Sealed Yes No
Received on Ice Yes No	Samples Intact Yes No
Temperature °C of Cooler	
Within Hold Time Yes No	Pickers Indicated Yes No <u>NA</u>
pH Check OK Yes No <u>NA</u>	Res. Cit Check OK Yes No <u>NA</u>
Sample Labels and COC Agree Yes No	COC not present

Sampler Name: RYAN YOUNG
 Signature: [Signature]
 Project Name: LAP SDIL
 Project Number:
 Project Location:
 Lab PM:
 Date Required:
 Hard Copy: 1
 Fax:

Matrix	Comp/Grab	Zn																		

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Zn														
			Date	Time																	
		JPL234-AP31(1)	4/30/07	1100	S	G	X														

Additional Analyses / Remarks

Z-DAY TAT

WO: 023

BDA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 4/30/07 TIME: 1314

RECEIVED BY: [Signature] COMPANY: STL DATE: 4/30/07 TIME: 1555

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - G =

- Container Key**
1. Plastic
 2. VCA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS:

Date Received: 4/30/07

Courier: STL Hand Delivered:

Bill of Lading:

rpjsckl

Job Sample Receipt Checklist Report

VZ

Job Number.: 250557 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID.....: Job Check List Date.: 04/30/2007 Date of the Report...: 05/02/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: rcw
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?

(Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... Y
- ...If "yes", custody seal intact?..... Y
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?..
- Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago
 2417 Bond Street
 University Park, IL 60456
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. P. P. 8. BRIGGS
 Company: MWH
 Address: CLAY
 Phone: 315-423-6041
 Fax:
 E-Mail:

Bill To:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only

250561

Lab Lot# 500² 250548

Package Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Refrigerated on Ice Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.2</u>	
Wettable Hold Time Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Preserv. Indicated Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	Res Cl. Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Sample Labels and CCK Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CCK not present	

Sampler Name: K. VAN YONGE
 Project Name: CLAY LAPSOIL
 Project Location:
 Lab PM:

Signature: [Signature]
 Project Number:
 Date Required
 Hard Copy: / /
 Fax: / /

Matrix	Comp/Grab	TOTAL PL	P ₁ T ₂ L ₁	Sampling	
				Date	Time
S	G	X	X	4/26/07	1100
		X	X		1105
		X	X		1110
		X	X		1115
		X	X		1120

Additional Analyses / Remarks

2 DAY TAT

NO-023

BOA-404

RELINQUISHED BY [Signature] COMPANY MWH DATE 4/26/07 TIME 1900

RECEIVED BY [Signature] COMPANY SR DATE 4/26/07 TIME 1500

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SC = Silt
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
- 1. Plastic
 - 2. VOA Vial
 - 3. Sterile Plastic
 - 4. Amber Glass
 - 5. Widemouth Glass
 - 6. Other

- Preservative Key**
- 1. HCl, Cool to 4°
 - 2. H2SO4, Cool to 4°
 - 3. HNO3, Cool to 4°
 - 4. NaOH, Cool to 4°
 - 5. NaOH/Zn, Cool to 4°
 - 6. Cool to 4°
 - 7. None

COMMENTS

Date Received 4/26/07
 Courier: SR Hand Delivered
 Bill of Lading

Job Number.: 250561 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 05/01/2007 Date of the Report...: 05/02/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Contact.: Brigid Brooks
 Customer.....: MWH Americas, Inc.

Questions ? (Y/N) Comments

- Chain-of-Custody Present?..... Y relog
- Were samples dropped off at or picked up by STL?..
- Custody seal on shipping container?.....
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?.....
- ...If "yes", custody seal intact?.....
- Samples iced?.....
- Temperature of cooler acceptable? (4 deg C +/- 2).
- Samples received intact (good condition)?.....
- Volatile samples acceptable? (no headspace).....
- Correct containers used?.....
- Adequate sample volume provided?.....
- Samples preserved correctly?.....
- Samples received within holding-time?.....
- Agreement between COC and sample labels?.....
- Radioactivity at or below background levels?.....
- A Sample Discrepancy Report (SDR) was needed?.....
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?..
- Sample Custodian Signature/Date.....

**SEVERN
TRENT** **STL**

STL Chicago C.C.: 050307
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Report To:

Bill To: SAME

Shaded Areas For Internal Use Only 1 of 1

Contact: S. Rosypal / B. Brooks
Company: MWH
Address: JOAAP
Phone: 815 423 6841
E-Mail:

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

Lab Lot# 250573

Package Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Samples Sealed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Received on Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Samples Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Temperature °C of Cooler <u>4.0</u>	
Within Hold Time Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Preserv. Indicated Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
pH Check OK Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA <input type="checkbox"/>	Res Cl₂ Check OK Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/>
Sample Labels and GOC Agree Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> COC not present	

Sampler Name: RYAN YOUNG
Signature: *[Signature]*
Project Name: LAP JOAAP SOILS
Project Number: _____
Project Location: _____
Lab PM: _____
Date Required: _____
Hard Copy: _____
Fax: _____

Refrg #	# / Cont	Volume	PresBrv

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Sb	Pb	Cu	Zn	Ba
			Date	Time							
1		JPL23A-SP1 (0.5)	5/3/07	1300	S	G	X	X	X	X	X
2		↓ SP2 (0.5)	↓	1305	↓	↓	X	X	X	X	X
3		↓ SP3 (0.5)	↓	1310	↓	↓	X	X	X	X	X
4		↓ SP4 (0.5)	↓	1315	↓	↓	X	X	X	X	X

Additional Analyses / Remarks
2 DAY TAT
WO: 023
BOA: 4016

RELINQUISHED BY: *[Signature]* COMPANY: MWH DATE: 5/3/07 TIME: 1530

RECEIVED BY: *[Signature]* COMPANY: STL DATE: 5/3/07 TIME: 1500

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Soils
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widenmouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Date Received 5/3/07
Courier: STL **Hand Delivered**
Bill of Lading

rpjsckl	Job Sample Receipt Checklist Report			V2
Job Number.: 250573	Location.: 57222	Check List Number.: 1	Description.:	
Customer Job ID.....:		Job Check list Date.: 05/03/2007	Date of the Report...: 05/07/2007	
Project Number.: 20005627	Project Description.: JOAAP: LAP		Project Manager.....: rcw	
Customer.....: MMH Americas, Inc.	Contact.: Brigid Brooks			
Questions ?	(Y/N)	Comments		
Chain-of-Custody Present?.....	Y			
Were samples dropped off at or picked up by STL?..	Y			
Custody seal on shipping container?.....	N			
...If "yes", custody seal intact?.....				
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples iced?.....	Y			
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.0	Y			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....				
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Radioactivity at or below background levels?.....	Y			
A Sample Discrepancy Report (SDR) was needed?.....	N			
Residual Chlorine Check Required?				
If samples were shipped was there an air bill #?..	N			
Sample Custodian Signature/Date.....	Y			

250586



STL Chicago COL: 050307
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To: S. Pasupati | B. Brooks
Contact: S. Pasupati | B. Brooks
Company: MWH
Address: JOAAP
Phone: 815 423 6841
Fax:
E-Mail:

Bill To: SAME
Contact:
Company:
Address:
Phone:
Fax:
POB: **Quote:**

Shaded Areas For Internal Use Only of

Lab Lot# 250573-R

Package Sealed Yes No	Samples Sealed Yes No
Received out box Yes No	Samples Intact Yes No
Temperature (C of Cooler) 40	
Within Hold Time Yes No	Preserv. Indicated Yes No NA
pH Check OK Yes No NA	Res. Cl. Check OK Yes No NA
Sample Labels and CDC Agree Yes No CDC not present	

Sampler Name: RYAN YOUNG
Signature: [Signature]
Project Name: LAP JOAAP SOILS
Project Location:
Lab PM:

Project Number:
Date Required
Hard Copy: / /
Fax: / /

Matrix	Comp/Grab	SB	PL	CV	Zn	Be												
--------	-----------	----	----	----	----	----	--	--	--	--	--	--	--	--	--	--	--	--

Laboratory ID	MIS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	SB	PL	CV	Zn	Be	Additional Analyses / Remarks									
			Date	Time																	
1		JPL23A-SP1 (0.5)	5/3/07	1300	S	G	X	X	X	X	X	2 DAY TAT									
2		SP2 (0.5)		1305			X	X	X	X	X										
3		SP3 (0.5)		1310			X	X	X	X	X										
4		SP4 (0.5)		1215			X	X	X	X	X	WO: 023 BOA: 4016									

RELINQUISHED BY: [Signature] **COMPANY:** MWH **DATE:** 5/3/07 **TIME:** 1530
RELINQUISHED BY: **COMPANY:** **DATE:** **TIME:**

RECEIVED BY: [Signature] **COMPANY:** STL **DATE:** 5/3/07 **TIME:** 1500
RECEIVED BY: **COMPANY:** **DATE:** **TIME:**

- Matrix Key**
- WW - Wastewater
 - W - Water
 - S - Soil
 - SL - Sludge
 - MS - Miscellaneous
 - OL - Oil
 - A - Air
 - SE - Sediment
 - SO - Solid
 - DS - Drum Solid
 - DL - Drum Liquid
 - L - Leachate
 - WI - Wipe
 - D -

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wide-mouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 5/3/07
Courier: STL **Hand Delivered**
Bill of Lading

rpjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 250595	Location.: 57222	Check List Number.: 1	Description.:	Date of the Report...: 05/24/2007
Customer Job ID.....:		Job Check List Date.: 05/10/2007		Project Manager.....: rcw
Project Number.: 20005627	Project Description.: JOAAP: LAP	Contact.: Brigid Brooks		
Customer.....: MWH Americas, Inc.				
Questions ?		(Y/N)	Comments	
Chain-of-Custody Present?.....		Y		
Were samples dropped off at or picked up by STL?... Y		Y		
Custody seal on shipping container?..... N		N		
...If "yes", custody seal intact?.....				
Custody seals on sample containers?..... N		N		
...If "yes", custody seal intact?.....				
Samples iced?.....		Y		
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.2		Y		
Samples received intact (good condition)?..... Y		Y		
Volatile samples acceptable? (no headspace).....				
Correct containers used?.....		Y		
Adequate sample volume provided?.....		Y		
Samples preserved correctly?.....		Y		
Samples received within holding-time?.....		Y		
Agreement between COC and sample labels?.....		Y		
Radioactivity at or below background levels?.....		Y		
A Sample Discrepancy Report (SDR) was needed?..... N		N		
Residual Chlorine Check Required?				
If samples were shipped was there an air bill #?... N		N		
Sample Custodian Signature/Date.....		Y		

rpjsckl Job Sample Receipt Checklist Report			V2
Job Number.: 250595	Location.: 57222	Check List Number.: 1	Description.:
Customer Job ID.....:		Job Check List Date.: 05/10/2007	Date of the Report...: 05/24/2007
Project Number.: 20005627	Project Description.: JOAAP: LAP	Contact.: Brigid Brooks	Project Manager.....: rcw
Customer.....: MWH Americas, Inc.			
Questions ?	(Y/N)	Comments	
Chain-of-Custody Present?.....	Y		
Were samples dropped off at or picked up by STL?... Y			
Custody seal on shipping container?..... N			
...If "yes", custody seal intact?.....			
Custody seals on sample containers?..... N			
...If "yes", custody seal intact?.....			
Samples iced?..... Y			
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.2			
Samples received intact (good condition)?..... Y			
Volatile samples acceptable? (no headspace).....			
Correct containers used?..... Y			
Adequate sample volume provided?..... Y			
Samples preserved correctly?..... Y			
Samples received within holding-time?..... Y			
Agreement between COC and sample labels?..... Y			
Radioactivity at or below background levels?..... Y			
A Sample Discrepancy Report (SDR) was needed?..... N			
Residual Chlorine Check Required?			
If samples were shipped was there an air bill #?... N			
Sample Custodian Signature/Date..... Y			

SEVERN TREN T STL

STL Chicago COL: 051107
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: S. Pasypala / B. Brookes
 Company: MWH
 Address: 10000
 Phone: 815 413 6641
 Fax:
 E-Mail:

Bill To:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Shaded Areas For Internal Use Only 1 of 1

Lab Lot# 250597

Package Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input type="radio"/>
Temperature °C of Cooler <u>4.4</u>	
Within Hold Time Yes <input checked="" type="radio"/> No <input type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>
pH Check OK Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>	Res Cl ₂ Check OK Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>
Sample Labels and COC Agree Yes <input checked="" type="radio"/> No <input type="radio"/> COC not present	

Sampler Name: RYAN YOUNG Signature: [Signature]
 Project Name: LAPSOIL Project Number:
 Project Location: Date Required
 Lab PMA: Hard Copy: Fax:

Refr #	# / Cont.	Volume	Preserv

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Cu	As	As	Zn	Cd	Pb
			Date	Time								
1		JPL2-AFS7(2)	5/11/07	900	S	G	X	X	X	X	X	X
2		AFS8(2)		905			X	X	X	X	X	X
3		AP112 (O.S)		910			X					
4		AP113 (O.S)		915			X					
5		AP114 (O.S)		920			X	X	X	X	X	X
		<u>AWBY</u>										
6		JPL2-AFS7(2)-D	5/11/07	900	S	G	X	X	X	X	X	X

Additional Analyses / Remarks
2 DAY TAT
WO: 021
BOA: 4016

RELINQUISHED BY: [Signature] COMPANY: MWH DATE: 5/11/07 TIME: 1400
 RECEIVED BY: [Signature] COMPANY: STL DATE: 5/11/07 TIME: 1430

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 CL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WI = Wipe
 O =

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Wigmout Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received: 5, 11, 07
 Courier: STL Hand Delivered: [Signature]
 Bill of Lading

rpjsckl Job Sample Receipt Checklist Report V2

Job Number.: 250597 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 05/11/2007 Date of the Report...: 05/14/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: RCW
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ? (Y/N) Comments

- Chain-of-Custody Present?..... Y
- Were samples dropped off at or picked up by STL?... Y
- Custody seal on shipping container?..... N
- ...If "yes", custody seal intact?.....
- Custody seals on sample containers?..... N
- ...If "yes", custody seal intact?.....
- Samples iced?..... Y
- Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.4
- Samples received intact (good condition)?..... Y
- Volatile samples acceptable? (no headspace).....
- Correct containers used?..... Y
- Adequate sample volume provided?..... Y
- Samples preserved correctly?..... Y
- Samples received within holding-time?..... Y
- Agreement between COC and sample labels?..... Y
- Radioactivity at or below background levels?..... Y
- A Sample Discrepancy Report (SDR) was needed?..... N
- Residual Chlorine Check Required?
- If samples were shipped was there an air bill #?... N
- Sample Custodian Signature/Date..... Y

SEVERN TRENT STL

STL Chicago 708-534-5207
 2417 Bond Street
 University Park, IL 60466
 Phone: 708-534-5200
 Fax: 708-534-5211

Report To:

Bill To:

Shaded Areas For Internal Use Only 1 of 1

Contact: S. ROSSETTI & B. ROWS
 Company: MWI
 Address: JORD
 Phone: 815-423-6841
 E-Mail:

Contact:
 Company:
 Address:
 Phone:
 Fax:
 PO#: Quote:

Lab Lot# 250603

Package Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Sealed Yes <input checked="" type="radio"/> No <input type="radio"/>
Received on Ice Yes <input checked="" type="radio"/> No <input type="radio"/>	Samples Intact Yes <input checked="" type="radio"/> No <input type="radio"/>
Temperature °C of Cooler 4.1	
Within-Hold Time Yes <input checked="" type="radio"/> No <input type="radio"/>	Preserv. Indicated Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>
pH Check OK Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>	Res Cl ₂ Check OK Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/>
Sample Labels and COC Agree Yes <input checked="" type="radio"/> No <input type="radio"/> COC not present <input type="radio"/>	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	Pb	Cd	Ag	As	Zn	Cu	Refr #	# / Cont.	Volume	Preserv	Signature
			Date	Time													
1		JPLZ-AP115(0.5)	5/15/07	730	S	G	X	X	X	X	X	X					Ryan Young
2		↓ AP116(0.5)	5/15/07	735	S	G	X	X	X	X	X	X					

Additional Analyses / Remarks

2 DAY TAT
 WD: 023
 BDA: 4016

RELINQUISHED BY: <i>[Signature]</i> COMPANY: MWI DATE: 5/15/07 TIME: 1600	RECEIVED BY: <i>[Signature]</i> COMPANY: STL DATE: 5/15/07 TIME: 1420
RELINQUISHED BY: COMPANY: DATE: TIME:	RECEIVED BY: COMPANY: DATE: TIME:

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SC = Solid
 DS = Drum Solid
 DL = Drum Liquid
 L = Leachate
 WL = Wipe
 O =

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS

Date Received 5/15/07
 Courier: STL Hand Delivered
 Bill of Lading

Job Number.: 250603 Location.: 57222 Check List Number.: 1 Description.:
 Customer Job ID..... Job Check List Date.: 05/15/2007 Date of the Report...: 05/17/2007
 Project Number.: 20005627 Project Description.: JOAAP: LAP Project Manager.....: RCW
 Customer.....: MWH Americas, Inc. Contact.: Brigid Brooks

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Were samples dropped off at or picked up by STL?... Y		
Custody seal on shipping container?..... N		
...If "yes", custody seal intact?.....		
Custody seals on sample containers?..... N		
...If "yes", custody seal intact?.....		
Samples iced?..... Y		
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.1		
Samples received intact (good condition)?..... Y		
Volatile samples acceptable? (no headspace).....		
Correct containers used?..... Y		
Adequate sample volume provided?..... Y		
Samples preserved correctly?..... Y		
Samples received within holding-time?..... Y		
Agreement between COC and sample labels?..... Y		
Radioactivity at or below background levels?..... Y		
A Sample Discrepancy Report (SDR) was needed?..... N		
Residual Chlorine Check Required?		
If samples were shipped was there an air bill #?.. N		
Sample Custodian Signature/Date..... Y		

rpjsckl	Job Sample Receipt Checklist Report		V2
Job Number.: 250606	Location.: 57222	Check List Number.: 1	Description.:
Customer Job ID.....:	Project Description.:	Job Check List Date.:	Date of the Report...: 05/21/2007
Project Number.: 20005627	Project Description.:	JOAAP: LAP	Project Manager.....: rcw
Customer.....: MMH Americas, Inc.	Contact.: Brigid Brooks		
Questions ?	(Y/N)	Comments	
Chain-of-Custody Present?.....	Y		
Were samples dropped off at or picked up by STL?... Y			
Custody seal on shipping container?.....	N		
...If "yes", custody seal intact?.....			
Custody seals on sample containers?.....	N		
...If "yes", custody seal intact?.....			
Samples iccd?.....	Y		
Temperature of cooler acceptable? (4 deg C +/- 2). Y 4.3			
Samples received intact (good condition)?.....	Y		
Volatile samples acceptable? (no headspace).....			
Correct containers used?.....	Y		
Adequate sample volume provided?.....	Y		
Samples preserved correctly?.....	Y		
Samples received within holding-time?.....	Y		
Agreement between CDC and sample labels?.....	Y		
Radioactivity at or below background levels?.....	Y		
A Sample Discrepancy Report (SDR) was needed?.....	N		
Residual Chlorine Check Required?			
If samples were shipped was there an air bill #?... N			
Sample Custodian Signature/Date.....	Y		

APPENDIX C
ANALYTICAL RESULTS

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 16)

Monitoring Well	Date Sampled	SDG	HMX		RDX		1,3,5-Trinitrobenzene		1,3-DNB		NB		2,4,6-TNT		Tetryl	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPM3-ITF-AF46(2)	7/27/2006	247884	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPM3-ITF-AF47(2)	7/27/2006	247884	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPM3-ITF-AF48(2)	7/27/2006	247884	500	U	250	U	250	U	250	U	250	U	250	U	45000	
JPM3-ITF-AF49(2)	7/27/2006	247884	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPM3-ITF-AF51(2)	7/27/2006	247884	490	U	240	U	240	U	240	U	240	U	240	U	490	U
JPM3-ITF-AF52(2)	7/27/2006	247884	490	U	240	U	240	U	240	U	240	U	240	U	490	U
JPM3-ITF-AF53(2)	7/27/2006	247884	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPM3-ITF-AF54(2)	7/27/2006	247884	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPM3-ITF-AF55(2)	7/27/2006	247884	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPM3-CP7-16	10/13/2006	249144	500	U	250	U	250	U	250	U	250	U	910		500	U
JPM3-CP7-17	10/13/2006	249144	760		1100		80000		540		250	U	450000		490	U
JPM3-CP7-18	10/13/2006	249144	500	U	250	U	3700		250	U	250	U	18000		500	U
JPM3-CP7-19	10/13/2006	249144	990	U	490	U	490	U	490	U	490	U	490	U	990	U
JPM3-CP7-20	10/13/2006	249144	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPM3-CP7-21	10/13/2006	249144	500	U	250	U	250	U	250	U	250	U	1800		500	U
JPM3-CP7-22	10/13/2006	249144	500	U	250	U	250	U	250	U	250	U	250	U	500	U J
JPM3-CP7-23	10/13/2006	249144	500	U	250	U	250	U	250	U	250	U	1900		500	U
JPM3ITFCP1-4(1)	11/1/2006	249398	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPM3ITFCP1-5(1)	11/1/2006	249398	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPM3ITFCP1-6(1)	11/1/2006	249398	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPM3ITFCP1-7(1)	11/1/2006	249398	500	U	250	U	250	U	250	U	250	U	4100		500	U
JPM3ITFCP1-8(1)	11/1/2006	249398	500	U	250	U	250	U	250	U	250	U	4000		1800	J
JPM3ITFCP1-9(1)	11/1/2006	249398	500	U	250	U	250	U	250	U	250	U	1800		2200	
JPM3ITFCP117(1)	11/1/2006	249398	490	U	240	U	240	U	240	U	240	U	1600		490	U
JPM3ITFCP118(1)	11/1/2006	249398	500	U	250	U	250	U	250	U	250	U	900		500	U
JPM3ITFCP119(1)	11/1/2006	249398	490	U	250	U	250	U	250	U	250	U	5500		490	U
JPM3-ITF-CP1-18(1)	11/1/2006	249477														

LF - lab flag
 J - estimated concentration
 ug/kg - micrograms per kilogram
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 16)

Monitoring Well	Date Sampled	SDG	2,4-DNT		2,6-DNT		2-Amino-4,6-DNT		4-Amino-2,6-DNT		2-NT		4-NT		3-NT	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPM3-ITF-AF46(2)	7/27/2006	247884	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPM3-ITF-AF47(2)	7/27/2006	247884	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPM3-ITF-AF48(2)	7/27/2006	247884	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPM3-ITF-AF49(2)	7/27/2006	247884	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPM3-ITF-AF51(2)	7/27/2006	247884	240	U	490	U	490	U	490	U	490	U	200	U	490	U
JPM3-ITF-AF52(2)	7/27/2006	247884	240	U	490	U	490	U	490	U	490	U	200	U	490	U
JPM3-ITF-AF53(2)	7/27/2006	247884	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPM3-ITF-AF54(2)	7/27/2006	247884	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPM3-ITF-AF55(2)	7/27/2006	247884	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPM3-CP7-16	10/13/2006	249144	1700		500	U	500	U	500	U	500	U	200	U	500	U
JPM3-CP7-17	10/13/2006	249144	11000		3900		34000		34000		490	U	200	U	490	U
JPM3-CP7-18	10/13/2006	249144	2800		500	U	5800		3500	J	500	U	200	U	500	U
JPM3-CP7-19	10/13/2006	249144	490	U	990	U	990	U	990	U	990	U	390	U	990	U
JPM3-CP7-20	10/13/2006	249144	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPM3-CP7-21	10/13/2006	249144	320		500	U	500	U	500	U	500	U	200	U	500	U
JPM3-CP7-22	10/13/2006	249144	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPM3-CP7-23	10/13/2006	249144	920		500	U	500	U	500	U	500	U	200	U	500	U
JPM3ITFCP1-4(1)	11/1/2006	249398	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPM3ITFCP1-5(1)	11/1/2006	249398	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPM3ITFCP1-6(1)	11/1/2006	249398	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPM3ITFCP1-7(1)	11/1/2006	249398	2300		500	U	1400		2100		500	U	200	U	500	U
JPM3ITFCP1-8(1)	11/1/2006	249398	2100		500	U	500	U	650		500	U	200	U	500	U
JPM3ITFCP1-9(1)	11/1/2006	249398	1800	U	500	U	500	U	500	U	500	U	200	U	500	U
JPM3ITFCP117(1)	11/1/2006	249398	840		2400		490	U	490	U	490	U	200	U	490	U
JPM3ITFCP118(1)	11/1/2006	249398	1500		500	U	500	U	500	U	500	U	200	U	500	U
JPM3ITFCP119(1)	11/1/2006	249398	2900		490	U	490	U	490	U	490	U	200	U	490	U
JPM3-ITF-CP1-18(1)	11/1/2006	249477														

LF - lab flag
J - estimated concentration
ug/kg - micrograms per kilogram
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 3 of 16)

Monitoring Well	Date Sampled	SDG	HMX		RDX		1,3,5-Trinitrobenzene		1,3-DNB		NB		2,4,6-TNT		Tetryl	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL2-ASH	11/17/2006	249602	490	U	240	U	240	U	240	U	240	U	240	U	490	U
JPL2-CP31(1)	11/17/2006	249603	500	U	250	U	250	U	250	U	250	U	1700		500	U
JPL2-CP37(1)	11/17/2006	249603	490	U	240	U	320		240	U	240	U	5400		490	U
JPL2-CP38(1)	11/17/2006	249603	880		250	U	250	U	250	U	250	U	31000		500	U
JPL2-CP39(1)	11/17/2006	249603	14000		40000		120000		2500	U	2500	U	710000		5000	U
JPL2-CP41(1)	11/17/2006	249603	980		250	U	250	U	250	U	250	U	940		490	U
JPL2-CP42(1)	11/17/2006	249603	14000		3600		42000		250	U	250	U	95000		490	U
JPL2-CP43(1)	11/17/2006	249603	910		250	U	250	U	250	U	250	U	2500		490	U
JPL5-L1(1)	1/9/2007	250012	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL5-L2(1)	1/9/2007	250012	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL5-L3(1)	1/9/2007	250012	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL5-L4(1)	1/9/2007	250012	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL5-L5(1)	1/9/2007	250012	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPM3-ITF-AP255(2)	11/30/2006	250165	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPM3-ITF-AP256(2)	11/30/2006	250165	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPM3-ITF-AF49B(1)	2/9/2006	250224	2100		250	U	250	U	250	U	250	U	690		500	U
JPM3-ITF-AF-227B(1)	2/9/2006	250224	490	U	250	U	250	U	250	U	250	U	1000		490	U
JPL2-AP35(1)	2/21/2007	250253	490	U	240	U	240	U	240	U	240	U	240	U	490	U
JPL2-AF29(2)	2/21/2007	250253	490	U	240	U	240	U	240	U	240	U	240	U	490	U
JPL2-AP36(0.5)	2/21/2007	250253	1600		240	U	240	U	240	U	240	U	760		490	U
JPL2-AP37(0.5)	2/21/2007	250253	1500		400		2700		250	U	250	U	48000		490	U
JPL2-AP38(0.5)	2/21/2007	250253	920		1100		250	U	250	U	250	U	17000		500	U
JPL2-AP39(0.5)	2/21/2007	250253	2200		480		830		240	U	240	U	42000		490	U
JPL2-AF30(1)	2/21/2007	250253	910		400		240	U	240	U	240	U	1300		480	U
JPL2-AP40(0.5)	2/21/2007	250253	6100		13000		4500		230	U	230	U	110000		470	U
JPL2-AP41(0.5)	2/21/2007	250253	210		1400		7500		230	U	230	U	92000		460	U
JPL2-AP42(0.5)	2/21/2007	250253	1700		1700		18000		250	U	250	U	32000		500	U

LF - lab flag
 J - estimated concentration
 ug/kg - micrograms per kilogram
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 4 of 16)

Monitoring Well	Date Sampled	SDG	2,4-DNT		2,6-DNT		2-Amino-4,6-DNT		4-Amino-2,6-DNT		2-NT		4-NT		3-NT	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL2-ASH	11/17/2006	249602	240	U	490	U	490	U	490	U	490	U	190	U	490	U
JPL2-CP31(1)	11/17/2006	249603	250	U	500	U	500	U	610	U	500	U	200	U	500	U
JPL2-CP37(1)	11/17/2006	249603	240	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-CP38(1)	11/17/2006	249603	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-CP39(1)	11/17/2006	249603	2500	U	5000	U	5000	U	5000	U	5000	U	2000	U	5000	U
JPL2-CP41(1)	11/17/2006	249603	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-CP42(1)	11/17/2006	249603	1000		970		4300		3100		490	U	200	U	490	U
JPL2-CP43(1)	11/17/2006	249603	250	U	490	U	490	U	720		490	U	200	U	490	U
JPL5-L1(1)	1/9/2007	250012	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL5-L2(1)	1/9/2007	250012	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL5-L3(1)	1/9/2007	250012	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL5-L4(1)	1/9/2007	250012	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL5-L5(1)	1/9/2007	250012	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPM3-ITF-AP255(2)	11/30/2006	250165	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPM3-ITF-AP256(2)	11/30/2006	250165	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPM3-ITF-AF49B(1)	2/9/2006	250224	250	U	500	U	930	J	570		500	U	200	U	500	U
JPM3-ITF-AF-227B(1)	2/9/2006	250224	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-AP35(1)	2/21/2007	250253	240	U	490	U	490	U	490	U	490	U	240	U	490	U
JPL2-AF29(2)	2/21/2007	250253	240	U	490	U	490	U	490	U	490	U	240	U	490	U
JPL2-AP36(0.5)	2/21/2007	250253	320		490	U	490	U	490	U	490	U	240	U	490	U
JPL2-AP37(0.5)	2/21/2007	250253	3700	J	1000	J	1400		1500		490	U	200	U	490	U
JPL2-AP38(0.5)	2/21/2007	250253	250	U	1600		990		500	U	500	U	200	U	500	U
JPL2-AP39(0.5)	2/21/2007	250253	640		550		3800		2700		490	U	190	U	490	U
JPL2-AF30(1)	2/21/2007	250253	260		480	U	940		1200		480	U	190	U	480	U
JPL2-AP40(0.5)	2/21/2007	250253	300		470	U	740		780		470	U	190	U	480	U
JPL2-AP41(0.5)	2/21/2007	250253	230	U	460	U	460	U	840		460	U	180	U	460	U
JPL2-AP42(0.5)	2/21/2007	250253	350		500	U	1800		1300		500	U	200	U	500	U

LF - lab flag
 J - estimated concentration
 ug/kg - micrograms per kilogram
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 5 of 16)

Monitoring Well	Date Sampled	SDG	HMX		RDX		1,3,5-Trinitrobenzene		1,3-DNB		NB		2,4,6-TNT		Tetryl	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL2-AP43(0.5)	2/21/2007	250253	7500		5900		28000		230	U	230	U	18000		470	U
JPL2-AF31(1)	2/21/2007	250253	500	U	1500		250	U	250	U	250	U	3000		500	U
JPL2-AP45(0.5)	2/21/2007	250253	3400		6200		12000		240	U	240	U	33000		490	U
JPL2-AP46(0.5)	2/21/2007	250253	2000		14000		520		250	U	250	U	3000		500	U
JPL2-AP47(0.5)	2/21/2007	250253	1800		4900		250	U	250	U	250	U	2900		500	U
JPL2-AF32(1)	2/21/2007	250253	500	U	780		250	U	250	U	250	U	3800		500	U
JPL2-AP48(0.5)	2/21/2007	250253	1400		820		20000		720		250	U	31000		500	U
JPL2-AP49(0.5)	2/21/2007	250253	2200		280		1200		250	U	250	U	8700		500	U
JPL2-AP51(0.5)	2/21/2007	250253	7100		590		250	U	250	U	250	U	620		490	U
JPL2-AF33(1)	2/21/2007	250253	2400		1900		1500		250	U	250	U	4400		500	U
JPL2-CP61(2)	2/21/2007	250253	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL2-CP62(2)	2/21/2007	250253	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL2-CP63(2)	2/21/2007	250253	1600		250	U	250	U	250	U	250	U	250	U	500	U
JPL2-CP64(2)	2/21/2007	250253	540		250	U	250	U	250	U	250	U	5000		500	U
JPL2-CP65(2)	2/21/2007	250253	1500		400		250	U	250	U	250	U	250	U	500	U
JPL2-CP66(2)	2/21/2007	250253	500	U	250	U	250	U	250	U	250	U	1200		500	U
JPL2-CP67(2)	2/21/2007	250253	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL2-CP68(2)	2/21/2007	250253	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL2-CP69(8)	2/21/2007	250253	2200		4400		250	U	250	U	250	U	250	U	500	U
JPL2-CP70(8)	2/21/2007	250253	1500		3800		250	U	250	U	250	U	250	U	500	U
JPL2-CP71(8)	2/21/2007	250253	4600		5700		250	U	250	U	250	U	250	U	500	U
JPL2-CP72(8)	2/21/2007	250253	3000		7100		250	U	250	U	250	U	250	U	500	U
JPL2-AP52(0.5)	2/21/2007	250253	3500		250	U	250	U	250	U	250	U	320		490	U
JPL2-AP22(1)	2/15/2007	250262	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL2-AP23(1)	2/15/2007	250262	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL2-AF19(2)	2/15/2007	250262	490	U	240	U	240	U	240	U	240	U	240	U	490	U
JPL2-AF20(2)	2/15/2007	250262	490	U	240	U	240	U	240	U	240	U	240	U	490	U

LF - lab flag
 J - estimated concentration
 ug/kg - micrograms per kilogram
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 6 of 16)

Monitoring Well	Date Sampled	SDG	2,4-DNT		2,6-DNT		2-Amino-4,6-DNT		4-Amino-2,6-DNT		2-NT		4-NT		3-NT	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL2-AP43(0.5)	2/21/2007	250253	810		1200		4800		3800		470	U	190	U	470	U
JPL2-AF31(1)	2/21/2007	250253	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP45(0.5)	2/21/2007	250253	1700		700		2500		2400		490	U	200	U	490	U
JPL2-AP46(0.5)	2/21/2007	250253	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP47(0.5)	2/21/2007	250253	530		500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AF32(1)	2/21/2007	250253	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP48(0.5)	2/21/2007	250253	360		500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP49(0.5)	2/21/2007	250253	250	U	500	U	500	U	1400		500	U	200	U	500	U
JPL2-AP51(0.5)	2/21/2007	250253	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-AF33(1)	2/21/2007	250253	250	U	500	U	750		1100		500	U	200	U	500	U
JPL2-CP61(2)	2/21/2007	250253	250	U	500	U	250	U	500	U	500	U	200	U	500	U
JPL2-CP62(2)	2/21/2007	250253	250	U	500	U	250	U	500	U	500	U	200	U	500	U
JPL2-CP63(2)	2/21/2007	250253	250	U	500	U	250	U	500	U	500	U	200	U	500	U
JPL2-CP64(2)	2/21/2007	250253	250	U	500	U	550		1100		500	U	200	U	500	U
JPL2-CP65(2)	2/21/2007	250253	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-CP66(2)	2/21/2007	250253	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-CP67(2)	2/21/2007	250253	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-CP68(2)	2/21/2007	250253	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-CP69(8)	2/21/2007	250253	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-CP70(8)	2/21/2007	250253	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-CP71(8)	2/21/2007	250253	250	U	500	U	730		870		500	U	200	U	500	U
JPL2-CP72(8)	2/21/2007	250253	250	U	500	U	720		840		500	U	200	U	500	U
JPL2-AP52(0.5)	2/21/2007	250253	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-AP22(1)	2/15/2007	250262	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP23(1)	2/15/2007	250262	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AF19(2)	2/15/2007	250262	240	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-AF20(2)	2/15/2007	250262	240	U	490	U	490	U	490	U	490	U	200	U	490	U

LF - lab flag
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 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 7 of 16)

Monitoring Well	Date Sampled	SDG	HMX		RDX		1,3,5-Trinitrobenzene		1,3-DNB		NB		2,4,6-TNT		Tetryl	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL2-AF25(2)	2/19/2007	250262	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPL2-AP34(1)	2/19/2007	250262	490	U	240	U	240	U	240	U	240	U	240	U	490	U
JPL2-AF28(2)	2/20/2007	250262	490	U	240	U	240	U	240	U	240	U	240	U	490	U
JPL2-CP73(0.5)	2/23/2007	250274	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPL2-CP74(0.5)	2/23/2007	250274	490	U	250	U	250	U	250	U	250	U	510		490	U
JPL2-CP75(0.5)	2/23/2007	250274	490	U	250	U	250	U	250	U	250	U	540		490	U
JPL2-CP76(0.5)	2/23/2007	250274	500	U	250	U	250	U	250	U	250	U	330		500	U
JPL2-CP77(0.5)	2/23/2007	250274	500	U	250	U	250	U	250	U	250	U	2600		500	U
JPL2-CP78(0.5)	2/23/2007	250274	320000		2100000		670000		25000	U	25000	U	25000000		49000	U
JPL2-CP79(0.5)	2/23/2007	250274	2700		240	U	240	U	240	U	240	U	2600		490	U
JPL2-CP80(0.5)	2/23/2007	250274	60000		1500000		370		250	U	250	U	140000		490	U
JPL2-CP81(0.5)	2/23/2007	250274	980		250	U	250	U	250	U	250	U	8900		500	U
JPL2-CP82(0.5)	2/23/2007	250274	1400		250	U	250	U	250	U	250	U	700		500	U
JPL2-CP83(0.5)	2/23/2007	250274	5000	U	2500	U	10000		2500	U	2500	U	740000		5000	U
JPL2-CP85(0.5)	2/23/2007	250274	1600		680		370		250	U	250	U	11000		500	U
JPL2-CP87(0.5)	2/23/2007	250274	3000		250	U	250	U	250	U	250	U	1600		490	U
JPL2-CP88(0.5)	2/23/2007	250274	630		250	U	250	U	250	U	250	U	3600		490	U
JPL2-CP89(0.5)	2/23/2007	250274	690		250	U	270		250	U	250	U	89000		500	U
JPL2-CP92(0.5)	2/23/2007	250274	800		4900		2800		250	U	250	U	8800		770	
JPL2-AP56(0.5)	2/26/2007	250285	1100		310000		5300		250	U	250	U	11000		8800	
JPL2-AP57(0.5)	2/26/2007	250285	4500		2600		5600		250	U	250	U	17000		500	U
JPL2-AP58(0.5)	2/26/2007	250285	1300		810		830		250	U	250	U	13000		490	U
JPL2-AP59(0.5)	2/26/2007	250285	1500		250	U	250	U	250	U	250	U	43000		500	U
JPL2-AP61(0.5)	2/26/2007	250285	1100		390		470		250	U	250	U	31000		500	U
JPL2-AF37(2)	2/26/2007	250285	2900		250	U	250	U	250	U	250	U	6500		500	U
JPL2-AF38(2)	2/26/2007	250285	500	U	590		250	U	250	U	250	U	460		500	U
JPL2-AP62(0.5)	2/26/2007	250285	1500		250	U	250	U	250	U	250	U	2400		500	U

LF - lab flag
 J - estimated concentration
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 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 8 of 16)

Monitoring Well	Date Sampled	SDG	2,4-DNT		2,6-DNT		2-Amino-4,6-DNT		4-Amino-2,6-DNT		2-NT		4-NT		3-NT	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL2-AF25(2)	2/19/2007	250262	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-AP34(1)	2/19/2007	250262	240	U	490	U	490	U	490	U	490	U	190	U	490	U
JPL2-AF28(2)	2/20/2007	250262	240	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-CP73(0.5)	2/23/2007	250274	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-CP74(0.5)	2/23/2007	250274	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-CP75(0.5)	2/23/2007	250274	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-CP76(0.5)	2/23/2007	250274	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-CP77(0.5)	2/23/2007	250274	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-CP78(0.5)	2/23/2007	250274	25000	U	49000	U	49000	U	49000	U	49000	U	20000	U	49000	U
JPL2-CP79(0.5)	2/23/2007	250274	240	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-CP80(0.5)	2/23/2007	250274	250	U	490	U	1400		1900		490	U	200	U	490	U
JPL2-CP81(0.5)	2/23/2007	250274	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-CP82(0.5)	2/23/2007	250274	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-CP83(0.5)	2/23/2007	250274	25000	U	5000	U	5000	U	11000		5000	U	2000	U	5000	U
JPL2-CP85(0.5)	2/23/2007	250274	250	U	500	U	500	U	600		500	U	200	U	500	U
JPL2-CP87(0.5)	2/23/2007	250274	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-CP88(0.5)	2/23/2007	250274	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-CP89(0.5)	2/23/2007	250274	250	U	500	U	740		1400		500	U	200	U	500	U
JPL2-CP92(0.5)	2/23/2007	250274	440		500	U	1400		3700		500	U	200	U	500	U
JPL2-AP56(0.5)	2/26/2007	250285	800		500	U	1800		3900		500	U	200	U	500	U
JPL2-AP57(0.5)	2/26/2007	250285	430		500	U	1500		3000		500	U	200	U	500	U
JPL2-AP58(0.5)	2/26/2007	250285	250	U	490	U	1100		1800		490	U	200	U	490	U
JPL2-AP59(0.5)	2/26/2007	250285	250	U	500	U	1200		830		500	U	200	U	500	U
JPL2-AP61(0.5)	2/26/2007	250285	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AF37(2)	2/26/2007	250285	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AF38(2)	2/26/2007	250285	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP62(0.5)	2/26/2007	250285	250	U	500	U	500	U	500	U	500	U	200	U	500	U

LF - lab flag
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 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 9 of 16)

Monitoring Well	Date Sampled	SDG	HMX		RDX		1,3,5-Trinitrobenzene		1,3-DNB		NB		2,4,6-TNT		Tetryl	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL2-AP63(0.5)	2/26/2007	250285	1400		860		1100		250	U	250	U	4900		500	U
JPL2-AP64(0.5)	2/26/2007	250285	1800		1200		370		250	U	250	U	3200		490	U
JPL2-AP65(0.5)	2/26/2007	250285	4600		6600		1100		250	U	250	U	40000		500	U
JPL2-AF39(2)	2/26/2007	250285	2000		250	U	250	U	250	U	250	U	250	U	490	U
JPL2-AP66(0.5)	2/26/2007	250285	600		250	U	250		250	U	250	U	800		500	U
JPL2-AP67(0.5)	2/26/2007	250285	710		250	U	250	U	250	U	250	U	1000		490	U
JPL2-AP68(0.5)	2/26/2007	250285	1100		250	U	620		250	U	250	U	2700000		500	U
JPL2-AF40(2)	2/26/2007	250285	810		250	U	250	U	250	U	250	U	250	U	500	U
JPL2-AP70(0.5)	2/27/2007	250293	8100		250	U	250	U	250	U	250	U	120000		490	U
JPL2-AP71(0.5)	2/27/2007	250293	2500		250	U	490		250	U	250	U	46000		490	U
JPL2-AP72(0.5)	2/27/2007	250293	63000		490000		250	U	250	U	250	U	130000		500	U
JPL2-AP73(0.5)	2/27/2007	250293	1700		1500		740		250	U	250	U	19000		500	U
JPL2-AP74(0.5)	2/27/2007	250293	1200		250	U	250	U	250	U	250	U	790		500	U
JPL2-AP73-D(0.5)	2/27/2007	250293	1900		2000		2000		240	U	240	U	22000		490	U
JPL2-AP74-D(0.5)	2/27/2007	250293	980		250	U	250	U	250	U	250	U	690		500	U
JPL2-AP75(0.5)	3/5/2007	250332	1100		47000		5300		250	U	250	U	88000		500	U
JPL2-AF41(2)	3/5/2007	250332	500	U	2300		400		250	U	250	U	4600		500	U
JPL2-AP79(0.5)	3/5/2007	250332	740		330		660		250	U	250	U	4100		500	U
JPL2-AP80(0.5)	3/5/2007	250332	2700		730		350		250	U	250	U	100000		490	U
JPL2-AP82(0.5)	3/5/2007	250332	1100		250	U	250	U	250	U	250	U	2600		490	U
JPL2-AF42(2)	3/5/2007	250332	1200		240	U	240	U	240	U	240	U	2100		490	U
JPL2-AP83(0.5)	3/5/2007	250332	3400		250	U	250	U	250	U	250	U	460		500	U
JPL2-AP84(0.5)	3/5/2007	250332	5100	J	300		250	U	250	U	250	U	420		500	U
JPL2-AP85(0.5)	3/5/2007	250332	5900		3600		250	U	250	U	250	U	250	U	500	U
JPL2-AP86(0.5)	3/5/2007	250332	2600		250	U	250	U	250	U	250	U	250	U	500	U
JPL2-AP87(0.5)	3/5/2007	250332	180000		390000		250	U	250	U	250	U	250	U	500	U
JPL2-AF43(2)	3/5/2007	250332	79000		240	U	240	U	240	U	240	U	240	U	490	U

LF - lab flag
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 ug/kg - micrograms per kilogram
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 10 of 16)

Monitoring Well	Date Sampled	SDG	2,4-DNT		2,6-DNT		2-Amino-4,6-DNT		4-Amino-2,6-DNT		2-NT		4-NT		3-NT	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL2-AP63(0.5)	2/26/2007	250285	430		500	U	990		1400		500	U	200	U	500	U
JPL2-AP64(0.5)	2/26/2007	250285	440		490	U	950		1100		490	U	200	U	490	U
JPL2-AP65(0.5)	2/26/2007	250285	650		500	U	6900		11000		500	U	200	U	500	U
JPL2-AF39(2)	2/26/2007	250285	250	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-AP66(0.5)	2/26/2007	250285	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP67(0.5)	2/26/2007	250285	250	U	490	U	490	U	610		490	U	200	U	490	U
JPL2-AP68(0.5)	2/26/2007	250285	1400		500	U	500	U	570		500	U	200	U	500	U
JPL2-AF40(2)	2/26/2007	250285	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP70(0.5)	2/27/2007	250293	250	U	490	U	570		780		490	U	200	U	490	U
JPL2-AP71(0.5)	2/27/2007	250293	250	U	490	U	940		2700		490	U	200	U	490	U
JPL2-AP72(0.5)	2/27/2007	250293	250	U	500	U	700		1600		500	U	200	U	500	U
JPL2-AP73(0.5)	2/27/2007	250293	600		500	U	630		1000		500	U	200	U	500	U
JPL2-AP74(0.5)	2/27/2007	250293	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP73-D(0.5)	2/27/2007	250293	240	U	490	U	750		940		490	U	200	U	490	U
JPL2-AP74-D(0.5)	2/27/2007	250293	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP75(0.5)	3/5/2007	250332	415		510		2200		1600		500	U	200	U	500	U
JPL2-AF41(2)	3/5/2007	250332	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP79(0.5)	3/5/2007	250332	250	U	500	U	1400		3500		500	U	200	U	500	U
JPL2-AP80(0.5)	3/5/2007	250332	1000		820		5200		7200		490	U	200	U	490	U
JPL2-AP82(0.5)	3/5/2007	250332	250	U	490	U	670		930		490	U	200	U	490	U
JPL2-AF42(2)	3/5/2007	250332	240	U	490	U	490	U	490	U	490	U	200	U	490	U
JPL2-AP83(0.5)	3/5/2007	250332	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP84(0.5)	3/5/2007	250332	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP85(0.5)	3/5/2007	250332	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP86(0.5)	3/5/2007	250332	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP87(0.5)	3/5/2007	250332	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AF43(2)	3/5/2007	250332	240	U	490	U	490	U	490	U	490	U	200	U	490	U

LF - lab flag
J - estimated concentration
ug/kg - micrograms per kilogram
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 11 of 16)

Monitoring Well	Date Sampled	SDG	HMX		RDX		1,3,5-Trinitrobenzene		1,3-DNB		NB		2,4,6-TNT		Tetryl	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL2-AP88(0.5)	3/5/2007	250332	520		250	U	780		250	U	250	U	2100		500	U
JPL2-AP89(0.5)	3/5/2007	250332	840		270		550		250	U	250	U	1600		500	U
JPL2-AP90(0.5)	3/5/2007	250332	500	U	250	U	250	U	250	U	250	U	420		500	U
JPL2-AP91(0.5)	3/6/2007	250340	1500		4300		250	U	250	U	250	U	3200		500	U
JPL2-AP92(0.5)	3/6/2007	250340	950		1500	J	2400		250	U	250	U	7300		500	U
JPL2-AP93(0.5)	3/6/2007	250340	830		1600		250	U	250	U	250	U	670		490	U
JPL2-AP94(0.5)	3/13/2007	250378	59000		2300		250	U	250	U	250	U	250	U	500	U
JPL2-SP1(0)	3/15/2007	250401	500	U	1300		780		250	U	250	U	20000		500	U
JPL2-SP2(0)	3/15/2007	250401	660		250	U	330		250	U	250	U	9100		500	U
JPL2-SP3(0)	3/15/2007	250401	2900		5600		3200		250	U	250	U	330000		500	U
JPL2-SP4(1)	3/20/2007	250418	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-Blast Pit (2)	8/1/2007	500-5681	500	U	250	U	250	U	250	U	250	U	280		500	U
JPL3-STOCKPILE-1(0)	8/2/2007	500-5719	500	U	270		250	U	250	U	250	U	430	J	500	U
JPL3-STOCKPILE-2(0)	8/2/2007	500-5719	500	U	250	U	250	U	250	U	250	U	400		500	U
JPM4-Sediment-8/2	8/2/2007	500-5720	500	U	250	U	250	U	250	U	250	U	640		500	U
JPL3-AP1(0.5)	9/12/2007	500-6506	500		510		250	U	250	U	250	U	2000		25000	
JPL3-AP2(0.5)	9/12/2007	500-6506	500	U	540		250	U	250	U	250	U	250	U	500	U
JPL3-AP3(0.5)	9/12/2007	500-6506	500	U	5700		9300		250	U	250	U	28000		560	
JPL3-AP4(0.5)	9/12/2007	500-6506	500	U	250	U	3700		250	U	250	U	3800		500	U
JPL3-AP5(0.5)	9/12/2007	500-6506	2100		9000		2100		250	U	250	U	3800		490	U
JPL3-AP6(0.5)	9/12/2007	500-6506	750		2000		250	U	250	U	250	U	330		500	U
JPL3-AP7(0.5)	9/12/2007	500-6506	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-AP8(0.5)	9/12/2007	500-6506	12000		38000		550		250	U	250	U	4200		490	U
JPL3-AP9(0.5)	9/12/2007	500-6506	670		1100		780		250	U	250	U	330000		500	U
JPL3-AP10(0.5)	9/12/2007	500-6506	500	U	1700		440		250	U	250	U	4000		500	U
JPL3-AP11(0.5)	9/12/2007	500-6506	500	U	250	U	250	U	250	U	250	U	540		970	
JPL3-AF1(2)	9/12/2007	500-6506	500	U	250	U	250	U	250	U	250	U	820		500	U

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 12 of 16)

Monitoring Well	Date Sampled	SDG	2,4-DNT		2,6-DNT		2-Amino-4,6-DNT		4-Amino-2,6-DNT		2-NT		4-NT		3-NT	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL2-AP88(0.5)	3/5/2007	250332	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP89(0.5)	3/5/2007	250332	250	U	500	U	560		740		500	U	200	U	500	U
JPL2-AP90(0.5)	3/5/2007	250332	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP91(0.5)	3/6/2007	250340	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-AP92(0.5)	3/6/2007	250340	510		500	U	860	J	500	U	500	U	200	U	500	U
JPL2-AP93(0.5)	3/6/2007	250340	250	U	490	U	490	U	690		490	U	200	U	490	U
JPL2-AP94(0.5)	3/13/2007	250378	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL2-SP1(0)	3/15/2007	250401	250	U	500	U	500	U	600	U	500	U	200	U	500	U
JPL2-SP2(0)	3/15/2007	250401	300		500	U	500	U	500	U	500	U	200	U	500	U
JPL2-SP3(0)	3/15/2007	250401	1900		1300		2700		6000		500	U	200	U	500	U
JPL2-SP4(1)	3/20/2007	250418	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL3-Blast Pit (2)	8/1/2007	500-5681	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-STOCKPILE-1(0)	8/2/2007	500-5719	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-STOCKPILE-2(0)	8/2/2007	500-5719	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPM4-Sediment-8/2	8/2/2007	500-5720	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AP1(0.5)	9/12/2007	500-6506	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AP2(0.5)	9/12/2007	500-6506	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AP3(0.5)	9/12/2007	500-6506	250	U	500	U	4500		3000		500	U	500	U	500	U
JPL3-AP4(0.5)	9/12/2007	500-6506	250	U	500	U	860		1100		500	U	500	U	500	U
JPL3-AP5(0.5)	9/12/2007	500-6506	390		490	U	530		490	U	490	U	490	U	490	U
JPL3-AP6(0.5)	9/12/2007	500-6506	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AP7(0.5)	9/12/2007	500-6506	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AP8(0.5)	9/12/2007	500-6506	250	U	490	U	960		1400		490	U	490	U	490	U
JPL3-AP9(0.5)	9/12/2007	500-6506	250	U	500	U	1000		1600		500	U	500	U	500	U
JPL3-AP10(0.5)	9/12/2007	500-6506	430		500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AP11(0.5)	9/12/2007	500-6506	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AF1(2)	9/12/2007	500-6506	250	U	500	U	500	U	500	U	500	U	500	U	500	U

LF - lab flag
J - estimated concentration
ug/kg - micrograms per kilogram
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 13 of 16)

Monitoring Well	Date Sampled	SDG	HMX		RDX		1,3,5-Trinitrobenzene		1,3-DNB		NB		2,4,6-TNT		Tetryl	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL3-AF2(2)	9/12/2007	500-6506	500	U	1300		250	U	250	U	250	U	250	U	500	U
JPL3-AF3(4)	9/12/2007	500-6506	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPL3-AF4(4)	9/12/2007	500-6506	500	U	530		250	U	250	U	250	U	660		500	U
JPL3-AF5(2)	9/12/2007	500-6506	500	U	250	U	250	U	250	U	250	U	5100		500	U
JPL3-AF6(2)	9/12/2007	500-6506	500	U	250	U	250	U	250	U	250	U	860		500	U
JPM4-POST-SB2	9/18/2007	500-6621	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-AP24(0.5)	9/19/2007	500-6650	490	U	240	U	240	U	240	U	240	U	240	U	490	U
JPL3-AP25(0.5)	9/19/2007	500-6650	500	U	250	U	250	U	250	U	250	U	330		500	U
JPL3-AP26(0.5)	9/19/2007	500-6650	490	U	870		240	U	240	U	240	U	240	U	490	U
JPL3-AP27(0.5)	9/19/2007	500-6650	490	U	240	U	240	U	240	U	240	U	240	U	490	U
JPL3-AP28(0.5)	9/19/2007	500-6650	500	U	4100		250	U	250	U	250	U	250	U	500	U
JPL3-AP29(0.5)	9/19/2007	500-6650	490	U	240	U	240	U	240	U	240	U	240	U	490	U
JPL3-AF21(1)	9/19/2007	500-6650	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-AF22(1)	9/19/2007	500-6650	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPL3-AF23(1)	9/19/2007	500-6650	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPL3-AF24(1)	9/19/2007	500-6650	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-AP20(0.5)	9/19/2007	500-6651	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-AP21(0.5)	9/19/2007	500-6651	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-AP22(0.5)	9/19/2007	500-6651	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-AP23(0.5)	9/19/2007	500-6651	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-AF17(1)	9/19/2007	500-6651	480	U	240	U	240	U	240	U	240	U	240	U	480	U
JPL3-AF18(1)	9/19/2007	500-6651	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPL3-AF19(1)	9/19/2007	500-6651	490	U	250	U	250	U	250	U	250	U	250	U	490	U
JPL3-AF20(1)	9/19/2007	500-6651	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-CONCRETE	9/21/2007	500-6713	490	U	370		240	U	240	U	240	U	240	U	490	U
JPL3-AP32(0.5)	9/21/2007	500-6714	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL2-CP95(0.5)	10/2/2007	500-6900	7100	J	3000	J	260		250	U	250	U	4300	J	500	U

LF - lab flag
 J - estimated concentration
 ug/kg - micrograms per kilogram
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 14 of 16)

Monitoring Well	Date Sampled	SDG	2,4-DNT		2,6-DNT		2-Amino-4,6-DNT		4-Amino-2,6-DNT		2-NT		4-NT		3-NT	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL3-AF2(2)	9/12/2007	500-6506	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AF3(4)	9/12/2007	500-6506	250	U	490	U	490	U	490	U	490	U	490	U	490	U
JPL3-AF4(4)	9/12/2007	500-6506	250	U	500	U	1000		600		500	U	500	U	500	U
JPL3-AF5(2)	9/12/2007	500-6506	250	U	500	U	2400		3100		500	U	500	U	500	U
JPL3-AF6(2)	9/12/2007	500-6506	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPM4-POST-SB2	9/18/2007	500-6621	250	U	500	U	500	U	500	U	500	U	200	U	500	U
JPL3-AP24(0.5)	9/19/2007	500-6650	240	U	490	U	490	U	490	U	490	U	490	U	490	U
JPL3-AP25(0.5)	9/19/2007	500-6650	250	U	500	U	750		690		500	U	500	U	500	U
JPL3-AP26(0.5)	9/19/2007	500-6650	240	U	490	U	490	U	490	U	490	U	490	U	490	U
JPL3-AP27(0.5)	9/19/2007	500-6650	240	U	490	U	490	U	490	U	490	U	490	U	490	U
JPL3-AP28(0.5)	9/19/2007	500-6650	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AP29(0.5)	9/19/2007	500-6650	240	U	490	U	490	U	490	U	490	U	490	U	490	U
JPL3-AF21(1)	9/19/2007	500-6650	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AF22(1)	9/19/2007	500-6650	250	U	490	U	490	U	490	U	490	U	490	U	490	U
JPL3-AF23(1)	9/19/2007	500-6650	250	U	490	U	490	U	490	U	490	U	490	U	490	U
JPL3-AF24(1)	9/19/2007	500-6650	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AP20(0.5)	9/19/2007	500-6651	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AP21(0.5)	9/19/2007	500-6651	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AP22(0.5)	9/19/2007	500-6651	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AP23(0.5)	9/19/2007	500-6651	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-AF17(1)	9/19/2007	500-6651	240	U	480	U	480	U	480	U	480	U	480	U	480	U
JPL3-AF18(1)	9/19/2007	500-6651	250	U	490	U	490	U	490	U	490	U	490	U	490	U
JPL3-AF19(1)	9/19/2007	500-6651	250	U	490	U	490	U	490	U	490	U	490	U	490	U
JPL3-AF20(1)	9/19/2007	500-6651	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-CONCRETE	9/21/2007	500-6713	240	U	490	U	490	U	490	U	490	U	490	U	490	U
JPL3-AP32(0.5)	9/21/2007	500-6714	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL2-CP95(0.5)	10/2/2007	500-6900	250	U	500	U	500	U	500	U	500	U	500	U	500	U

LF - lab flag
 J - estimated concentration
 ug/kg - micrograms per kilogram
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 15 of 16)

Monitoring Well	Date Sampled	SDG	HMX		RDX		1,3,5-Trinitrobenzene		1,3-DNB		NB		2,4,6-TNT		Tetryl	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL2-CP96(0.5)	10/2/2007	500-6900	600		300		250	U	250	U	250	U	690		500	U
JPL2-CP97(0.5)	10/2/2007	500-6900	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL2-CP98(0.5)	10/2/2007	500-6900	500	U	250	U	250	U	250	U	250	U	480		500	U
JPM4-Demo Debris	10/8/2007	500-7026	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-SP1(0.5)	10/9/2007	500-7047	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-SP2(0.5)	10/9/2007	500-7047	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-SP3(0.5)	10/9/2007	500-7047	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-SP4(0.5)	10/9/2007	500-7047	500	U	250	U	250	U	250	U	250	U	250		500	U
JPL3-SP5(0.5)	10/9/2007	500-7047	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPL3-SP6(0.5)	10/9/2007	500-7047	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JP-BorrowSource Clay1	10/9/2007	500-7048	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPM4 POST SB1 NN	10/12/2007	500-7145	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPM4 POST SB1 NE	10/12/2007	500-7145	500	U	250	U	250	U	250	U	250	U	250	U	500	U
JPM4 POST SB1 SN	10/12/2007	500-7145	490	U	240	U	240	U	240	U	240	U	240	U	490	U
JPM4 POST SB1 SE	10/12/2007	500-7145	500	U	250	U	250	U	250	U	250	U	250	U	500	U

LF - lab flag
 J - estimated concentration
 ug/kg - micrograms per kilogram
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-1

Explosives - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 16 of 16)

Monitoring Well	Date Sampled	SDG	2,4-DNT		2,6-DNT		2-Amino-4,6-DNT		4-Amino-2,6-DNT		2-NT		4-NT		3-NT	
			Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF	Res	LF VF
JPL2-CP96(0.5)	10/2/2007	500-6900	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL2-CP97(0.5)	10/2/2007	500-6900	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL2-CP98(0.5)	10/2/2007	500-6900	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPM4-Demo Debris	10/8/2007	500-7026	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-SP1(0.5)	10/9/2007	500-7047	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-SP2(0.5)	10/9/2007	500-7047	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-SP3(0.5)	10/9/2007	500-7047	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-SP4(0.5)	10/9/2007	500-7047	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-SP5(0.5)	10/9/2007	500-7047	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPL3-SP6(0.5)	10/9/2007	500-7047	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JP-BorrowSource Clay1	10/9/2007	500-7048	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPM4 POST SB1 NN	10/12/2007	500-7145	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPM4 POST SB1 NE	10/12/2007	500-7145	250	U	500	U	500	U	500	U	500	U	500	U	500	U
JPM4 POST SB1 SN	10/12/2007	500-7145	240	U	490	U	490	U	490	U	490	U	490	U	490	U
JPM4 POST SB1 SE	10/12/2007	500-7145	250	U	500	U	500	U	500	U	500	U	500	U	500	U

LF - lab flag
 J - estimated concentration
 ug/kg - micrograms per kilogram
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-2

Explosives - Groundwater (ug/L)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 1)

Sample Identification	Date Sampled	SDG	HMx			RDX			1,3,5-TNB			1,3-DNB			NB			2,4,6-TNT			Tetryl			2,4-DNT			2,6-DNT			2-Amino-4,6-DNT			4-Amino-2,6-DNT			2-NT			4-NT			3-NT			2,4-DNT TCLP		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF						
JPM3-UNKNOWN MATERIAL	8/31/2006	248470	5000	U		2500	U		2500	U		2500	U		2500	U		2500	U		5000	U		2500	U		5000	U		5000	U		5000	U		5000	U		2000	U		5000	U				
JPM3-CP7-18	10/18/2006	249183	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			0.34	U				
JPM3-ITF-CP1-18(1)	11/1/2006	249477	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			0.52	U				
JPL2-AP37(0.5)	2/21/2007	250286	NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			0.55	U				
JPM4-Excavation Water	6/7/2007	500-4598	2.5			7.7			0.39	U		0.39	U		0.39	U		0.39	U		0.78	U		0.54			0.78	U		0.78	U		0.78	U		0.78	U		0.78	U		0.78	U				
JPL2-Stormwater-US#5	7/19/2007	500-5427	0.0026	U		0.0014	U		0.0014	U		0.0014	U		0.0014	U		0.0014	U		0.0033	U		0.0026	U		0.0026	U		0.0026	U		0.0026	U		0.0026	U		0.0026	U		0.0026	U				
JPL3-Stormwater-US#5	7/19/2007	500-5427	0.0026	U		0.0014	U		0.0014	U		0.0014	U		0.0014	U		0.0014	U		0.0033	U		0.0026	U		0.0026	U		0.0026	U		0.0026	U		0.0026	U		0.0026	U		0.0026	U				
JPM4-SB-1-RAW-8/2	8/2/2007	500-5718	4			6.2			0.4	U		0.4	U	J	0.4	U	J	0.4	U		0.81	U	J	0.4	U		0.81	U		0.81	U		0.81	U		0.81	U		0.81	U	J	0.81	U	J			
JPM4-STORMWATER-US#6	8/20/2007	500-6088	0.81	U		0.4	U		0.4	U		0.4	U		0.4	U		0.4	U		0.81	U		0.4	U		0.81	U		0.81	U		0.81	U		0.81	U		0.81	U		0.81	U				
JPM4-STORMWATER-DS#6	8/20/2007	500-6088	1	U		0.5	U		0.5	U		0.5	U		0.5	U		0.5	U		1	U		0.5	U		1	U		1	U		1	U		1	U		1	U		1	U				
JPL3-Stormwater-US#6	8/20/2007	500-6089	11			110			0.53	U		0.53	U		0.53	U		4.8			1.1	U		6.3			1.1	U		2.9			1.1	U		1.1	U		1.1	U		1.1	U				
JPL3-Stormwater-DS#6	8/20/2007	500-6089	8.6			66			0.39	U		0.39	U		0.39	U		0.97			0.78	U		2.5			0.78	U		2.7			0.78	U		0.78	U		0.78	U		0.78	U				

LF - lab flag
 ug/L - micrograms per liter
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 22)

Sample Identification	Date Sampled	SDG	Benzo(a)pyrene			Indeno(1,2,3-cd)pyrene			Dibenzo(a,h)anthracene			Benzo(ghi)perylene			Monochloronaphthalene			Dichloronaphthalene			Trichloronaphthalene			Tetrachloronaphthalene			Pentachloronaphthalene			Hexachloronaphthalene			Heptachloronaphthalene			Octachloronaphthalene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-CP1(0.5)	7/6/2006	247532	850			600			190	J			790			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP2(0.5)	7/6/2006	247532	2100			1400			500				1600			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP3(0.5)	7/6/2006	247532	650			510			180				570			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP4(0.5)	7/6/2006	247532	98			72			27	J			88			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP5(0.5)	7/6/2006	247532	16	J		12	J		34	U			13	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP6(0.5)	7/6/2006	247532	1100			780			210				850			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP7(0.5)	7/6/2006	247532	7000	J		5600	J		1100				6800	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP8(0.5)	7/6/2006	247532	380			340			120	J			380			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP9(0.5)	7/6/2006	247532	2500			1800			500				2000			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP10(0.5)	7/6/2006	247532	1800			1300			390				1500			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP11(0.5)	7/6/2006	247532	890			690			200				800			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP12(0.5)	7/6/2006	247532	600			450			72	J			520			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP13(0.5)	7/6/2006	247532	3800			2500			730				3000			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP14(0.5)	7/6/2006	247532	530			560			130	J			560			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP15(0.5)	7/6/2006	247532	1100			780			230				820			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP16(0.5)	7/6/2006	247532	73			60			17	J			74			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP17(0.5)	7/6/2006	247532	3200			2200			630				2500			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP18(0.5)	7/6/2006	247532	15000			11000			5400				13000			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP19(0.5)	7/6/2006	247532	380			260			68	J			330			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP20(0.5)	7/6/2006	247532	69			79			42	U			86			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP21(0.5)	7/6/2006	247532	3700	U		3700	U		3700	U			3700	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP22(0.5)	7/6/2006	247532	95			73			18	J			86			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP23(0.5)	7/6/2006	247532	650			450			140	J			540			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP24(0.5)	7/6/2006	247532	9500			6900			2900				7400			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-CP25(0.5)	7/6/2006	247532	10000	J		7200	J		2900	J			7900	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF1	7/17/2006	247700	36	U	J	22	J	J	22	J	J		29	J	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF2	7/17/2006	247700	38	U	J	38	U	J	38	U	J		38	U	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF3	7/17/2006	247700	41	U	J	8.4	J	J	41	U	J		41	U	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF4	7/17/2006	247700	190	J	J	140	J	J	60	J	J		160	J	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF5	7/17/2006	247700	160	J	J	150	J	J	190	U	J		180	J	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF6	7/17/2006	247700	7.9	J	J	8.6	J	J	38	U	J		10	J	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF7	7/17/2006	247700	17	J	J	20	J	J	19	J	J		21	J	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF8	7/17/2006	247700	16	J	J	21	J	J	40	U	J		28	J	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF9	7/17/2006	247700	39	U	J	39	U	J	39	U	J		39	U	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF10	7/17/2006	247700	42	U	J	42	U	J	42	U	J		42	U	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP1	7/17/2006	247700	170	J	J	170	J	J	200	U	J		240	J	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP2	7/17/2006	247700	120	J	J	90	J	J	28	J	J		110	J	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP3	7/17/2006	247700	20	J	J	18	J	J	34	U	J		23	J	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP4	7/17/2006	247700	69	J	J	50	J	J	19	J	J		63	J	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP5	7/17/2006	247700	42	U	J	42	U	J	42	U	J		42	U	J	NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP8(1)	7/19/2006	247748	40	U		40	U		40	U			40	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP9(1)	7/19/2006	247748	1400			1100			520				1100			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF11(1)	7/19/2006	247748	40			31	J		17	J			36			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF11(3)	7/19/2006	247748	39	U		39	U		39	U			39	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF12(2)	7/19/2006	247748	41	U		41	U		41	U			41	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF13(2)	7/19/2006	247748	41	U		41	U		41	U			41	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF14(2)	7/19/2006	247748	38	U		38	U		38	U			38	U		NS			NS			NS			NS			NS			NS			NS				

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

NS - not sampled

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 3 of 22)

Sample Identification	Date Sampled	SDG	Naphthalene			Acenaphthylene			Acenaphthene			Fluorene			Phenanthrene			Anthracene			Fluoranthene			Pyrene			Benzo(a)anthracene			Chrysene			Benzo(b)fluoranthene			Benzo(k)fluoranthene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AF15(2)	7/19/2006	247748	41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U				
JPM3-ITF-AF16(2)	7/19/2006	247748	41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U				
JPM3-ITF-AF17(2)	7/19/2006	247748	41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U				
JPM3-ITF-AF19(2)	7/19/2006	247748	41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U				
JPM3-ITF-AF20(2)	7/19/2006	247748	41	U		41	U		41	U		41	U		21	J		41	U		51	J		43	J		31	J		40	J		30	J		40	J	
JPM3-ITF-AF20(2)D	7/19/2006	247748	40	U		40	U		40	U		40	U		40	U		40	U		27	J		21	J		40	U		40	U		40	U		40	U	
JPM3-ITF-AF21(2)	7/19/2006	247748	37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U	
JPM3-ITF-AF22(3)	7/19/2006	247748	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U	
JPM3-ITF-AF23(2)	7/19/2006	247748	41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		21	J		21	J		21	J		21	J	
JPM3-ITF-AF24(2)	7/19/2006	247748	38	U		38	U	J	38	U	J	38	U	J	38	U	J	38	U	J	13	J		9	J	J	38	U		38	U		38	U		38	U	
JPM3-ITF-AF25(2)	7/19/2006	247748	39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U	
JPM3-ITF-AF24(2)D	7/19/2006	247748	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPM3-ITF-AP12(1)	7/24/2006	247811	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U	
JPM3-ITF-AP13(1)	7/24/2006	247811	37	U		37	U		37	U		37	U		37	U		37	U		25	J		17	U		37	U		19	J		37	U		37	U	
JPM3-ITF-AP14(1)	7/24/2006	247811	39	U	J	39	U		39	U		39	U		39	U		39	U		24	J		19	J		39	U		19	J		39	U		39	U	
JPM3-ITF-AP15(1)	7/24/2006	247811	40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U	
JPM3-ITF-AF28(2)	7/24/2006	247811	35	U	J	35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U	
JPM3-ITF-AF29(2)	7/24/2006	247811	39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U	
JPM3-ITF-AF30(2)	7/24/2006	247811	42	U		42	U		19	J		30	J		460			170			3100			2600			1700			1800			2000			1200		
JPM3-ITF-AF31(2)	7/24/2006	247811	40	U		40	U		40	U		40	U		40	U		40	U		24	J		19	J		18	J		24	J		24	J		21	J	
JPM3-ITF-AF32(2)	7/24/2006	247811	39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U	
JPM3-ITF-AF33(2)	7/24/2006	247811	37	U		37	U		37	U		37	U		12	J		37	U		49			37	J		24	J		29	J		34	J		24	J	
JPM3-ITF-AF34(2)	7/24/2006	247811	37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U	
JPM3-ITF-AF35(2)	7/24/2006	247811	42	U		42	U		42	U		42	U		42	U		42	U		20	J		20	J		19	J		26	J		44			38	U	
JPM3-ITF-AP13(1)D	7/24/2006	247811	38	U		38	U		38	U		38	U		14	J		38	U		28	J		21	J		12	J		22	J		22	J		15	J	
JPM3-ITF-AP16(1)	7/25/2006	247836	21	J		38	U		38	U		38	U		36	J		38	U		37	J		35	J		38	U	J	38	U		38	U	J	38	U	
JPM3-ITF-AP17(1)	7/25/2006	247836	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	J	38	U	
JPM3-ITF-AP18(1)	7/25/2006	247836	27	J		40	U		36	J		40			360			88			540			450			280			330			320	J		320	J	
JPM3-ITF-19(1)	7/25/2006	247836	39	U	J	39	U		39	U		39	U		86			22	J		190			150			83			100			75	J		110	J	
JPM3-ITF-21(1)	7/25/2006	247836	42	U		8.5	J		42	U		42	U		61			20	J		220			170			100			170			180	J		150	J	
JPM3-ITF-AF36(3)	7/25/2006	247836	41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U	J	41	U	
JPM3-ITF-AF37(3)	7/25/2006	247836	37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U	J	37	U	
JPM3-ITF-AF38(2)	7/25/2006	247836	37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U	J	37	U	
JPM3-ITF-AF39(2)	7/25/2006	247836	37	U	J	37	U		37	U		37	U		25	J		37	U		50			41			25	J		31	J		28	J	J	34	J	J
JPM3-ITF-AF40(2)	7/25/2006	247836	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	J	38	U	
JPM3-ITF-AF41(2)	7/25/2006	247836	39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U	J	39	U	
JPM3-ITF-AF42(2)	7/25/2006	247836	39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U	J	39	U	
JPM3-ITF-AF43(2)	7/25/2006	247836	40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U	J	40	U	
JPM3-ITF-AF44(2)	7/25/2006	247836	38	U		38	U		38	U		38	U		30	J		38	U		110			99			63			84			84	J		83	J	
JPM3-ITF-AP23(1)	7/27/2006	247884	41	U		41	U		41	U		41	U		41	U		41	U		41	U	J	41	U		41	U		41	U		41	U		41	U	J
JPM3-ITF-AP24(1)	7/27/2006	247884	39	U		39	U		39	U		39	U		39	U		39	U		39	U	J	12	J		39	U		39	U		39	U		39	U	J
JPM3-ITF-AP25(2)	7/27/2006	247884	41	U		41	U		41	U		41	U		41	U		41	U		41	U	J	41	U		41	U		41	U		41	U		41	U	J
JPM3-ITF-AP26(2)	7/27/2006	247884	41	U		41	U		41	U		41	U		41	U		41	U		41	U	J	41	U		41	U		41	U		41	U		41	U	J
JPM3-ITF-AP27(2)	7/27/2006	247884	39	U		39	U		39	U		39	U		39	U		39	U		39	U	J	39	U		39	U		39	U		39	U		39	U	J
JPM3-ITF-AP28(2)	7/27/2006	247884	38	U		38	U		38	U		38	U		38	U		38	U		38	U	J	38	U		38	U		38	U		38	U		38	U	J
JPM3-ITF-AP29(2)	7/27/2006	247884	40	U		40	U		40	U		40	U		40	U		40	U		40	U	J	40	U		40	U		40	U		40	U		40	U	J
JPM3-ITF-AF46(2)	7/27/2006	247884	42	U		42	U		42	U		42	U		42	U		42	U		42	U	J	42	U		42	U		42	U		42	U		42	U	J

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample Identification	Date Sampled	SDG	Benzo(a)pyrene			Indeno(1,2,3-cd)pyrene			Dibenzo(a,h)anthracene			Benzo(ghi)perylene			Monochloronaphthalene			Dichloronaphthalene			Trichloronaphthalene			Tetrachloronaphthalene			Pentachloronaphthalene			Hexachloronaphthalene			Heptachloronaphthalene			Octachloronaphthalene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AF15(2)	7/19/2006	247748	41	U		41	U		41	U		41	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF16(2)	7/19/2006	247748	41	U		41	U		41	U		41	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF17(2)	7/19/2006	247748	41	U		41	U		41	U		41	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF19(2)	7/19/2006	247748	41	U		41	U		41	U		41	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF20(2)	7/19/2006	247748	32	J		25	J		41	U		28	J	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF20(2)D	7/19/2006	247748	40	U		40	U		40	U		40	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF21(2)	7/19/2006	247748	37	U		37	U		37	U		37	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF22(3)	7/19/2006	247748	42	U		42	U		42	U		42	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF23(2)	7/19/2006	247748	24	J		22	J		41	U		24	J	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF24(2)	7/19/2006	247748	38	U		38	U		38	U		38	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF25(2)	7/19/2006	247748	39	U		39	U		39	U		39	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF24(2)D	7/19/2006	247748	38	U		38	U		38	U		38	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP12(1)	7/24/2006	247811	42	U		42	U		42	U		42	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP13(1)	7/24/2006	247811	37	U		37	U		37	U		37	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP14(1)	7/24/2006	247811	39	U		39	U		39	U		39	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP15(1)	7/24/2006	247811	40	U		40	U		40	U		40	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF28(2)	7/24/2006	247811	35	U		35	U		35	U		35	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF29(2)	7/24/2006	247811	39	U		39	U		39	U		39	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF30(2)	7/24/2006	247811	1500			1000			520			1100		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF31(2)	7/24/2006	247811	17	J		40	U		40	U		40	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF32(2)	7/24/2006	247811	39	U		39	U		39	U		39	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF33(2)	7/24/2006	247811	26	J		16	J		8.2	J		18	J	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF34(2)	7/24/2006	247811	37	U		37	U		37	U		37	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF35(2)	7/24/2006	247811	36	J		28	J		24	J		30	J	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP13(1)D	7/24/2006	247811	15	J		11	J		38	U		15	J	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP16(1)	7/25/2006	247836	38	U		38	U	J	38	U	J	38	U	J	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AP17(1)	7/25/2006	247836	38	U		38	U		38	U		38	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP18(1)	7/25/2006	247836	330			220			100			280		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-19(1)	7/25/2006	247836	86			59			29	J		68		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-21(1)	7/25/2006	247836	130			91			42	J		110		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF36(3)	7/25/2006	247836	41	U		41	U		41	U		23	J	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF37(3)	7/25/2006	247836	37	U		37	U		37	U		37	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF38(2)	7/25/2006	247836	37	U		37	U		37	U		37	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF39(2)	7/25/2006	247836	28	J		22	J		37	J		26	J	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF40(2)	7/25/2006	247836	38	U		38	U		38	U		38	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF41(2)	7/25/2006	247836	39	U		39	U		39	U		39	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF42(2)	7/25/2006	247836	39	U		39	U		39	U		39	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF43(2)	7/25/2006	247836	40	U		40	U		40	U		40	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF44(2)	7/25/2006	247836	78			61			29	J		74		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP23(1)	7/27/2006	247884	41	U		27	J		24	J		34	J	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP24(1)	7/27/2006	247884	39	U		39	U		39	U		39	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP25(2)	7/27/2006	247884	41	U		41	U		41	U		41	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP26(2)	7/27/2006	247884	41	U		41	U		41	U		41	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP27(2)	7/27/2006	247884	39	U		39	U		39	U		39	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP28(2)	7/27/2006	247884	38	U		38	U		38	U		38	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AP29(2)	7/27/2006	247884	40	U		40	U		40	U		40	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				
JPM3-ITF-AF46(2)	7/27/2006	247884	42	U		42	U		42	U		42	U	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS				

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

NS - not sampled

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 5 of 22)

Sample Identification	Date Sampled	SDG	Naphthalene			Acenaphthylene			Acenaphthene			Fluorene			Phenanthrene			Anthracene			Fluoranthene			Pyrene			Benzo(a)anthracene			Chrysene			Benzo(b)fluoranthene			Benzo(k)fluoranthene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AF47(2)	7/27/2006	247884	42	U		42	U		42	U		42	U		42	U		42	U	J	42	U		42	U		42	U		42	U		42	U	J			
JPM3-ITF-AF48(2)	7/27/2006	247884	41	U		41	U		41	U		41	U		41	U		41	U	J	41	U		41	U		41	U		41	U		41	U	J			
JPM3-ITF-AF49(2)	7/27/2006	247884	41	U		41	U		41	U		41	U		41	U		41	U	J	41	U		41	U		41	U		23	J		23	J	J			
JPM3-ITF-AF51(2)	7/27/2006	247884	39	U		39	U		39	U		39	U		39	U		39	U	J	39	U		39	U		39	U		39	U		39	U	J			
JPM3-ITF-AF52(2)	7/27/2006	247884	41	U		41	U		41	U		41	U		41	U		41	U	J	41	U		41	U		41	U		41	U		41	U	J			
JPM3-ITF-AF53(2)	7/27/2006	247884	41	U		41	U		41	U		41	U		41	U		41	U	J	41	U		41	U		41	U		41	U		41	U	J			
JPM3-ITF-AF54(2)	7/27/2006	247884	41	U		22	J		41	U		41	U		26	J		25	J		89	J		76	J		59	J		82	J		99	J		100	J	
JPM3-ITF-AF55(2)	7/27/2006	247884	40	U		40	U		40	U		40	U		40	U		40	U	J	40	U		40	U		40	U		40	U		40	U	J			
JPM3-ITF-AF56(2)	7/28/2006	247904	44	U		44	U		44	U		44	U		44	U		44	U	J	20	J		21	J		44	U		18	J		19	J		44	U	J
JPM3-ITF-AF57(2)	7/28/2006	247904	43	U		43	U		43	U		43	U		43	U		43	U	J	43	U		43	U		43	U		43	U		43	U		43	U	J
JPM3-ITF-AF58(2)	7/28/2006	247904	42	U		42	U		42	U		42	U		42	U		42	U	J	42	U		42	U		42	U		42	U		42	U		42	U	J
JPM3-ITF-AF59(2)	7/28/2006	247904	39	U		39	U		39	U		39	U		39	U		39	U	J	39	U		39	U		39	U		39	U		39	U		39	U	J
JPM3-ITF-AF60(2)	7/28/2006	247904	43	U		43	U		43	U		43	U		43	U		43	U	J	43	U		43	U		43	U		43	U		43	U		43	U	J
JPM3-ITF-AF62(2)	7/28/2006	247904	42	U		42	U		42	U		42	U		42	U		42	U	J	42	U		42	U		42	U		42	U		42	U		42	U	J
JPM3-ITF-AF63(2)	7/28/2006	247904	44	U		44	U		44	U		44	U		44	U		44	U	J	44	U		44	U		44	U		44	U		44	U		44	U	J
JPM3-ITF-AF64(2)	7/28/2006	247904	44	U		44	U		44	U		44	U		44	U		44	U	J	44	U		44	U		44	U		44	U		44	U		44	U	J
JPM3-ITF-AF65(2)	7/28/2006	247904	41	U		41	U		41	U		41	U		41	U		41	U	J	41	U		41	U		41	U		41	U		41	U		41	U	J
JPM3-ITF-AF64(2)	7/28/2006	247904	39	U		39	U		39	U		39	U		39	U		39	U	J	39	U		39	U		39	U		39	U		39	U		39	U	J
JPM3-ITF-AP30(2)	7/28/2006	247904	44	U		44	U		44	U		44	U		44	U		16	J		13	J		44	U		44	U		44	U		44	U		44	U	J
JPM3-ITF-AP31(2)	7/28/2006	247904	46	U		46	U		46	U		46	U		46	U		12	J		46	U		46	U		9.7	J		46	U		46	U		46	U	J
JPM3-ITF-AF58(2)-D	7/28/2006	247904	42	U		42	U		42	U		42	U		42	U		42	U	J	42	U		42	U		42	U		42	U		42	U		42	U	J
JPM3-ITF-AF60(2)-D	7/28/2006	247904	44	U		44	U		44	U		44	U		44	U		44	U	J	44	U		44	U		44	U		44	U		44	U		44	U	J
JPM3-ITF-AF67(2)	8/1/2006	247954	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J
JPM3-ITF-AF68(2)	8/1/2006	247954	38	U	J	38	U	J	38	U	J	38	U	J	17	J		38	U	J	30	J	J	23	J	J	13	J		15	J		15	J		16	J	J
JPM3-ITF-AF69(2)	8/1/2006	247954	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J	40	U	J
JPM3-ITF-AF70(2)	8/1/2006	247954	41	U	J	41	U	J	41	U	J	41	U	J	41	U	J	41	U	J	41	U	J	41	U	J	41	U	J	41	U	J	41	U	J	41	U	J
JPM3-ITF-AP32(1)	8/1/2006	247954	41	U	J	41	U	J	41	U	J	41	U	J	9.9	U		41	U	J	10	J		41	U	J	41	U	J	12	J	J	10	J		41	U	J
JPM3-ITF-AP33(1)	8/1/2006	247954	41	U	J	41	U	J	41	U	J	41	U	J	26	J		41	U	J	57	J		40	J	J	25	J		42	J		52	J		29	J	J
JPM3-ITF-AP34(1)	8/1/2006	247954	39	U	J	39	U	J	39	U	J	39	U	J	75			18	J	J	150	J		120	J		65			76	J		73			64	J	
JPM3-ITF-AP35(1)	8/1/2006	247954	37	U	J	37	U	J	37	U	J	37	U	J	60			16	J	J	160	J		150	J		77			92	J		100			82	J	
JPM3-ITF-AP34(1)-D	8/1/2006	247954	37	U	J	37	U	J	37	U	J	37	U	J	39			37	U	J	80	J		90	J		46			55	J		53			65	J	
JPM3-ITF-AP36(1)	8/4/2006	248048	42	U		42	U		42	U		42	U		15	J		42	U		40	J		34	J		21	J		31	J		42	J		22	J	
JPM3-ITF-AP37(1)	8/4/2006	248048	42	U		10	J		42	U		42	U		11	J		9.2	J		28	J		25	J		14	J		28	J		46			21	J	
JPM3-ITF-AP38(1)	8/4/2006	248048	42	U		42	U		42	U		42	U		42	U		42	U		18	J		14	J		42	U		14	J		16	J		42	U	
JPM3-ITF-AF71(2)	8/4/2006	248048	45	U	J	45	U	J	45	U	J	45	U	J	33	J		45	U	J	67			54			20	J		32	J		32	J		17	J	
JPM3-ITF-AF72(2)	8/4/2006	248048	46	U	J	46	U	J	46	U	J	46	U	J	46	U		46	U	J	46	U		46	U		46	U		46	U		46	U		46	U	
JPM3-ITF-AF73(2)	8/4/2006	248048	43	U		43	U		43	U		43	U		33	J		43	U	J	64			47			26	J		29	J		41	J		13	J	
JPM3-ITF-AF74(2)	8/4/2006	248048	43	U	J	43	U	J	43	U	J	43	U	J	43	U		43	U	J	14	J		12	J		43	U		11	J		17	J		43	U	
JPM3-ITF-AF75(2)	8/4/2006	248048	10	J	J	57	J	J	13	J	J	15	J	J	65	J		68	J	J	150	J		140	J		96			160			260			130		
JPM3-ITF-AF76(2)	8/4/2006	248048	43	U	J	43	U	J	43	U	J	43	U	J	43	U		43	U	J	43	U		43	U		43	U		43	U		43	U		43	U	
JPM3-ITF-AF77(2)	8/4/2006	248048	41	U	J	41	U	J	41	U	J	41	U	J	41	U		41	U	J	41	U		41	U		41	U		41	U		41	U		41	U	
JPM3-ITF-AF78(2)	8/4/2006	248048	42	U	J	42	U	J	42	U	J	42	U	J	42	U		42	U	J	42	U		42	U		42	U		42	U		42	U		42	U	
JPM3-ITF-AF79(2)	8/4/2006	248048	42	U	J	42	U	J	42	U	J	42	U	J	31	J	J	42	U	J	45	J		40	J	J	26	J		36	J		45			21	J	
JPM3-ITF-AF80(2)	8/4/2006	248048	45	U	J	18	J		45	U		45	U		8.4	J		14	J		18	J		21	J		54			90			160			97		
JPM3-ITF-AF72(2)-D	8/4/2006	248048	45	U	J	45	U	J	45	U	J	45	U	J	45	U		45	U	J	45	U		45	U		45	U		45	U		45	U		45	U	
JPM3-ITF-AP38(1)-D	8/4/2006	248048	43	U	J	43	U	J	43	U	J	43	U	J	43	U		43	U	J	15	J		14	J		43	U		11	J		16	J		43	U	
JPM3-ITF-AF81(2)	8/7/2006	248065	40	U	J	40	U	J	40	U	J	40	U	J	40	U		40	U	J	55			47			21	J		29	J		27	J		17	J	

LF - lab flag
J - estimated concentration
ug/kg - micrograms per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF -

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 6 of 22)

Sample Identification	Date Sampled	SDG	Benzo(a)pyrene			Indeno(1,2,3-cd)pyrene			Dibenzo(a,h)anthracene			Benzo(ghi)perylene			Monochloronaphthalene			Dichloronaphthalene			Trichloronaphthalene			Tetrachloronaphthalene			Pentachloronaphthalene			Hexachloronaphthalene			Heptachloronaphthalene			Octachloronaphthalene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AF47(2)	7/27/2006	247884	42	U		42	U		42	U		42	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF48(2)	7/27/2006	247884	41	U		41	U		41	U		41	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF49(2)	7/27/2006	247884	41	U		41	U		41	U		41	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF51(2)	7/27/2006	247884	39	U		39	U		39	U		39	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF52(2)	7/27/2006	247884	41	U		41	U		41	U		41	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF53(2)	7/27/2006	247884	41	U		41	U		41	U		41	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF54(2)	7/27/2006	247884	84	U		69	J		34	J		79	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF55(2)	7/27/2006	247884	40	U		40	U		40	U		40	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF56(2)	7/28/2006	247904	18	J		28	J		21	J		39	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF57(2)	7/28/2006	247904	43	U		28	J		26	J		31	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF58(2)	7/28/2006	247904	42	U		42	U		42	U		42	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF59(2)	7/28/2006	247904	39	U		39	U		39	U		39	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF60(2)	7/28/2006	247904	43	U		43	U		43	U		43	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF62(2)	7/28/2006	247904	42	U		42	U		42	U		42	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF63(2)	7/28/2006	247904	44	U		44	U		44	U		44	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF64(2)	7/28/2006	247904	44	U		44	U		44	U		44	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF65(2)	7/28/2006	247904	41	U		41	U		41	U		41	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF64(2)	7/28/2006	247904	39	U		39	U		39	U		39	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP30(2)	7/28/2006	247904	44	U		44	U		44	U		44	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP31(2)	7/28/2006	247904	46	U		46	U		46	U		46	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF58(2)-D	7/28/2006	247904	42	U		42	U		42	U		42	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF60(2)-D	7/28/2006	247904	44	U		44	U		44	U		44	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF67(2)	8/1/2006	247954	40	J		40	J		40	J		40	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF68(2)	8/1/2006	247954	16	J		12	J		38	J		13	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF69(2)	8/1/2006	247954	40	J		40	J		40	J		40	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF70(2)	8/1/2006	247954	41	J		41	J		41	J		41	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP32(1)	8/1/2006	247954	41	J		41	J		41	J		41	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP33(1)	8/1/2006	247954	33	J		25	J		11	J		26	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP34(1)	8/1/2006	247954	72	J		51	J		22	J		49	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP35(1)	8/1/2006	247954	100	J		72	J		32	J		89	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP34(1)-D	8/1/2006	247954	59	J		47	J		22	J		54	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP36(1)	8/4/2006	248048	28	J		21	J		13	J		29	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP37(1)	8/4/2006	248048	25	J		28	J		12	J		37	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP38(1)	8/4/2006	248048	42	U		42	U		42	U		42	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF71(2)	8/4/2006	248048	21	J		15	J		45	U		20	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF72(2)	8/4/2006	248048	46	U		46	U		46	U		46	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF73(2)	8/4/2006	248048	23	J		17	J		43	U		17	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF74(2)	8/4/2006	248048	9.8	J		8.8	J		43	U		43	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF75(2)	8/4/2006	248048	160	J		130	J		50	J		170	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF76(2)	8/4/2006	248048	43	U		43	U		43	U		43	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF77(2)	8/4/2006	248048	41	U		41	U		41	U		41	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF78(2)	8/4/2006	248048	42	U		42	U		42	U		42	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF79(2)	8/4/2006	248048	30	J		16	J		42	U		20	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF80(2)	8/4/2006	248048	100	J		53	J		18	J		53	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF72(2)-D	8/4/2006	248048	45	U		45	U		45	U		45	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP38(1)-D	8/4/2006	248048	9.3	J		10	J		43	U		13	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF81(2)	8/7/2006	248065	17	J		12	J		40	U		16	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

NS - not sampled

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 7 of 22)

Sample Identification	Date Sampled	SDG	Naphthalene			Acenaphthylene			Acenaphthene			Fluorene			Phenanthrene			Anthracene			Fluoranthene			Pyrene			Benzo(a)anthracene			Chrysene			Benzo(b)fluoranthene			Benzo(k)fluoranthene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AF82(2)	8/7/2006	248065	38	U	J	38	U		38	U		38	U		46			38	U		68			50			31	J		55			69			25	J	
JPM3-ITF-AF83(2)	8/7/2006	248065	26	J		40	U		40	U		40	U		64			40	U		110			84			37	J		56			60			26	J	
JPM3-ITF-AF84(2)	8/7/2006	248065	42	U	J	42	U		42	U		42	U		42	U		42	U		45			37	J		27	J		29	J		43			19	J	
JPM3-ITF-AP44(1)	8/7/2006	248065	400	U	J	400	U		400	U		400	U		400	U		400	U		400	U		400	U		400	U		400	U		400	U		400	U	
JPM3-ITF-AF83(2)-D	8/7/2006	248065	31	J		40	U		40	U		40	U		78			18	J		140			120			71			120			79			90		
JPM3-ITF-AF85(2)	8/8/2006	248084	36	U		36	U		36	U		36	U		36	U		36	U		36	U		36	U		16	J		20	J		21	J		32	J	
JPM3-ITF-AF86(2)	8/8/2006	248084	36	U		36	U		36	U		36	U		22	J		36	U		12	J		26	J		7.6	J		15	J		16	J		36	U	
JPM3-ITF-AF87(2)	8/8/2006	248084	39	U		39	U		39	U		39	U		39	U		39	U		22	J		16	J		39	U		39	U		22	J		24	J	
JPM3-ITF-AF88(2)	8/8/2006	248084	36	U		36	U		36	U		36	U		36	U		36	U		36	U		36	U		36	U		36	U		36	U		36	U	
JPM3-ITF-AF89(2)	8/8/2006	248084	35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U	
JPM3-ITF-AF90(2)	8/8/2006	248084	38	U		38	U		38	U		38	U		14	J		38	U		22	J		19	J		10	J		20	J		20	J		38	U	
JPM3-ITF-AF91(2)	8/8/2006	248084	37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U	
JPM3-ITF-AF92(2)	8/8/2006	248084	37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U	
JPM3-ITF-AF93(2)	8/8/2006	248084	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPM3-ITF-AF94(2)	8/8/2006	248084	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPM3-ITF-AP46(1)	8/8/2006	248084	380	U		380	U		380	U		380	U		380	U		380	U		380	U		380	U		380	U		380	U		380	U		380	U	
JPM3-ITF-AP47(1)	8/8/2006	248084	36	U		36	U		36	U		36	U		26	J		12	J		64			53			36	U		83			67			48		
JPM3-ITF-AF91(2)-D	8/8/2006	248084	37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U	
JPM3-ITF-AF95(2)	8/11/2006	248160	41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		14	J		14	J		14	J		16	J	J
JPM3-ITF-AF96(2)	8/11/2006	248160	40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U	
JPM3-ITF-AF97(2)	8/11/2006	248160	38	U		38	U		38	U		38	U		38	U		38	U		18	J		15	J		16	J		15	J		28	J		14	J	J
JPM3-ITF-AF98(2)	8/11/2006	248160	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPM3-ITF-AF99(2)	8/11/2006	248160	40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U	
JPM3-ITF-AF101(2)	8/11/2006	248160	41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U	
JPM3-ITF-AF102(2)	8/11/2006	248160	40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U	
JPM3-ITF-AF99(2)-D	8/11/2006	248160	39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U	
JPM3-ITF-AF103(2)	8/14/2006	248182	10	J		38	U		38	U		38	U		31	J		38	U		43			36	J		20	J		26	J		31	J		17	J	
JPM3-ITF-AF104(2)	8/14/2006	248182	35	U		35	U		35	U		35	U		15	J		35	U		34	J		27	J		17	J		27	J		26	J		19	J	
JPM3-ITF-AF105(2)	8/14/2006	248182	39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U	
JPM3-ITF-AF106(2)	8/14/2006	248182	39	U		39	U		39	U		39	U		8.1	J		66			14	J		120			89			48			50			61		
JPM3-ITF-AF107(2)	8/14/2006	248182	34	U		17	J		55			67			720			150			1300			1100			570			590			740			600		
JPM3-ITF-AF105(2)-D	8/14/2006	248182	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPM3-ITF-AF110(2)	8/15/2006	248190	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPM3-ITF-AF111(2)	8/15/2006	248190	36	U		36	U		36	U		36	U		72	J		18	J		170			130			72			93			110			53	J	
JPM3-ITF-AF113(2)	8/15/2006	248190	37	U		37	U		37	U		37	U		17	J		37	U		54			44			40	45		45			76			39	J	
JPM3-ITF-AF114(2)	8/15/2006	248190	39	U		39	U		39	U		39	U		34	J		39	U		46			45			24	J		31	J		42			22	J	J
JPM3-ITF-AF115(2)	8/15/2006	248190	36	U		36	U		36	U		36	U		110	J		36	U		200			200			54			110			100			74	J	
JPM3-ITF-AF113(2)-D	8/15/2006	248190	36	U		36	U		36	U		36	U		14	J		36	U		43			40			24	J		37			54			39	J	
JPM3-ITF-AP50(1)	8/16/2006	248208	36	U		36	U		36	U		36	U		25	J		36	U		95			73			50			65			84			54		
JPM3-ITF-AP51(1)	8/16/2006	248208	39	U		39	U		39	U		39	U		56			32	J		140			110			82			110			140			120		
JPM3-ITF-AP54(1)	8/16/2006	248208	37	U		37	U		37	U		37	U		76			13	J		130			110			55			87			83			71		
JPM3-ITF-AP55(1)	8/16/2006	248208	380	U		380	U		380	U		380	U		380	U		380	U		380	U		380	U		380	U		380	U		380	U		380	U	
JPM3-ITF-AP56(1)	8/16/2006	248208	690	U	J	690	U		690	U		690	U		690	U		690	U		690	U		690	U		690	U		690	U		690	U		690	U	
JPM3-ITF-AP55(1)-D	8/16/2006	248208	390	U	J	390	U		390	U		390	U		390	U		390	U		390	U		390	U		390	U		390	U		390	U		390	U	
JPM3-ITF-AF116(2)	8/17/2006	248233	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPM3-ITF-AF117(2)	8/17/2006	248233	36	U		36	U		36	U		36	U		36	U		36	U		36	U		36	U		36	U		36	U		36	U		36	U	
JPM3-ITF-AF118(2)	8/17/2006	248233	38	U		38	U		38	U		38	U		51			13	J		120			100			72			87			96	J		57		

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample Identification	Date Sampled	SDG	Benzo(a)pyrene			Indeno(1,2,3-cd)pyrene			Dibenzo(a,h)anthracene			Benzo(ghi)perylene			Monochloronaphthalene			Dichloronaphthalene			Trichloronaphthalene			Tetrachloronaphthalene			Pentachloronaphthalene			Hexachloronaphthalene			Heptachloronaphthalene			Octachloronaphthalene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AF82(2)	8/7/2006	248065	35	J		32	J		38	U		38	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF83(2)	8/7/2006	248065	36	J		23	J		40	U		32	J		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF84(2)	8/7/2006	248065	33	J		22	J		42	U		28	J		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AP44(1)	8/7/2006	248065	400	U		400	U		400	U		400	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF83(2)-D	8/7/2006	248065	93			68			11	J		75	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF85(2)	8/8/2006	248084	36	U		22	J		36	U		27	J		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF86(2)	8/8/2006	248084	36	U		12	J		36	U		19	J		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF87(2)	8/8/2006	248084	17	J		18	J		39	U		19	J		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF88(2)	8/8/2006	248084	36	U		36	U		36	U		36	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF89(2)	8/8/2006	248084	35	U		35	U		35	U		35	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF90(2)	8/8/2006	248084	38	U		38	U		38	U		38	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF91(2)	8/8/2006	248084	37	U		37	U		37	U		37	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF92(2)	8/8/2006	248084	37	U		37	U		37	U		37	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF93(2)	8/8/2006	248084	38	U		38	U		38	U		38	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF94(2)	8/8/2006	248084	38	U		38	U		38	U		38	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AP46(1)	8/8/2006	248084	380	U		380	U		380	U		380	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AP47(1)	8/8/2006	248084	96			36	U		36	U		50	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF91(2)-D	8/8/2006	248084	37	U		37	U		37	U		37	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF95(2)	8/11/2006	248160	13	J		23	J		22	J		30	J		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF96(2)	8/11/2006	248160	40	U		40	U		40	U		40	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF97(2)	8/11/2006	248160	17	J		15	J		38	U		20	J		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF98(2)	8/11/2006	248160	38	U		38	U		38	U		38	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF99(2)	8/11/2006	248160	40	U		40	U		40	U		40	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF101(2)	8/11/2006	248160	41	U		41	U		41	U		41	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF102(2)	8/11/2006	248160	40	U		40	U		40	U		40	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF99(2)-D	8/11/2006	248160	39	U		39	U		39	U		39	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF103(2)	8/14/2006	248182	17	J		16	J		9.4	J		22	J		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF104(2)	8/14/2006	248182	17	J		11	J		35	U		14	J		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF105(2)	8/14/2006	248182	39	U		39	U		39	U		39	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF106(2)	8/14/2006	248182	49			29	J		39	U		35	J		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF107(2)	8/14/2006	248182	620			390			110			460	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF105(2)-D	8/14/2006	248182	38	U		38	U		38	U		38	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF110(2)	8/15/2006	248190	38	U		38	U		38	U		38	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF111(2)	8/15/2006	248190	75			56			21	J	J	67	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF113(2)	8/15/2006	248190	43			40			37	U		56	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF114(2)	8/15/2006	248190	23	J		21	J		39	U		30	J		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF115(2)	8/15/2006	248190	57			81			36	U		110	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF113(2)-D	8/15/2006	248190	30	J		36	U		35	J		42	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AP50(1)	8/16/2006	248208	48			35	J		36	U		41	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AP51(1)	8/16/2006	248208	93			79			38	J	J	94	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AP54(1)	8/16/2006	248208	61			61			37	U		77	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AP55(1)	8/16/2006	248208	380	U		380	U		380	U		380	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AP56(1)	8/16/2006	248208	690	U		690	U		690	U		690	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AP55(1)-D	8/16/2006	248208	390	U		390	U		390	U		390	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF116(2)	8/17/2006	248233	38	U		38	U		38	U		38	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF117(2)	8/17/2006	248233	36	U		36	U		36	U		36	U		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				
JPM3-ITF-AF118(2)	8/17/2006	248233	66			48			12	J		54	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS		NS	NS				

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

NS - not sampled

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample Identification	Date Sampled	SDG	Naphthalene			Acenaphthylene			Acenaphthene			Fluorene			Phenanthrene			Anthracene			Fluoranthene			Pyrene			Benzo(a)anthracene			Chrysene			Benzo(b)fluoranthene			Benzo(k)fluoranthene					
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF						
JPM3-ITF-AF119(2)	8/17/2006	248233	34	U		34	U		34	U		34	U		22	J		34	U		70			65			45			51			71	J		35					
JPM3-ITF-AF121(2)	8/17/2006	248233	45	U		45	U		45	U		45	U		9.6	J		45	U		24	J		22	J		13	J		17	J		28	J		45	U				
JPM3-ITF-AF122(2)	8/17/2006	248233	34	U		34	U		34	U		34	U		9.8	J		34	U		32	J		29	J		25	J		29	J		45	J		14	J				
JPM3-ITF-AF123(2)	8/17/2006	248233	35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U				
JPM3-ITF-AF124(2)	8/17/2006	248233	36	U		36	U		36	U		36	U		25	J		36	U		85			83			64			70			86	J		51					
JPM3-ITF-AP57(1)	8/17/2006	248233	37	U		37	U		37	U		37	U		23	J		37	U		54			49			25	J		50			62	J		30	J				
JPM3-ITF-AF119(2)-D	8/17/2006	248233	34	U		34	U		34	U		7.4	J		64			15	J		110			100			53			59			74	J		32	J				
JPM3-ITF-AP60(1)	8/18/2006	248248	19	J		35	U		17	J		17	J		290			80			800			750			430			650			570	J		740					
JPM3-ITF-AP61(1)	8/18/2006	248248	10	J		9.9	J		8.1	J		7.5	J		150			37			430			370			280			280			380	J		360					
JPM3-ITF-AP63(1)	8/18/2006	248248	15	J		27	J		73			69			1000			200			2200			1700			1000			980			1300	J		870					
JPM3-ITF-AF125(2)	8/21/2006	248271	39	U	J	39	U		39	U		39	U		14	J		39	U		41			41			45			53			57	J		71					
JPM3-ITF-AF126(2)	8/21/2006	248271	39	U		39	U		39	U		39	U		21	J		39	U		97			99			81			110			98	J		89					
JPM3-ITF-AF127(2)	8/21/2006	248271	38	U		38	U		38	U		38	U		18	J		38	U		99			87			86			100			140	J		47					
JPM3-ITF-AF128(2)	8/21/2006	248271	34	U		34	U		34	U		34	U		7.3	J		34	U		8.1	J		8.4	J		34	U		7.1	J		14	J	J	34	U				
JPM3-ITF-AF129(2)	8/21/2006	248271	39	U		39	U		39	U		39	U		39	U		39	U		8.8	J		39	U		39	U		8.1	J		15	J	J	39	U				
JPM3-ITF-AF130(2)	8/21/2006	248271	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPM3-ITF-AF131(2)	8/21/2006	248271	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPM3-ITF-AF132(2)	8/21/2006	248271	40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U	
JPM3-ITF-AF133(2)	8/21/2006	248271	40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U	
JPM3-ITF-AF130(2)-D	8/21/2006	248271	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPM3-ITF-AP64(1)	8/22/2006	248289	39	U		39	U		39	U		39	U		60			15	J		120			130			61			82			110			63					
JPM3-ITF-AP65(1)	8/22/2006	248289	38	U		38	U		38	U		38	U		87			21	J		220			210			130			170			220			120					
JPM3-ITF-AP66(1)	8/22/2006	248289	40	U		40	U		40	U		40	U		21	J		40	U		60			48			43			45			73			33	J				
JPM3-ITF-AF134(2)	8/22/2006	248289	37	U		37	U		37	U		37	U		22	J		37	U		53			42			24	J		29	J		36	J		19	J				
JPM3-ITF-AF135(2)	8/22/2006	248289	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPM3-ITF-AF136(2)	8/22/2006	248289	34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U	
JPM3-ITF-AP67(1)	8/23/2006	248301	38	U		38	U		38	U		38	U		17	J		38	U		40			30	J		18	J		32	J		30	J		16	J				
JPM3-ITF-AP68(1)	8/23/2006	248301	36	U		13	J		11	J		8.4	J		120			32	J		370			330			190			350			350			200					
JPM3-ITF-AP69(1)	8/23/2006	248301	41	U		41	U		43			45			540			120			890			700			340			410			460			170					
JPM3-ITF-AP70(1)	8/23/2006	248301	8.5	J		8.1	J		89			86			1000			230			1700			1300			660			820			1000			320					
JPM3-ITF-AF137(2)	8/23/2006	248301	38	U		38	U		38	U		38	U		8	J		38	U		18	J		13	J		9.4	J		14	J		20	J		38	U				
JPM3-ITF-AF138(2)	8/23/2006	248301	36	U		36	U		36	U		36	U		40			10	J		91			70			44			52			64			28	J				
JPM3-ITF-AF139(2)	8/23/2006	248301	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPM3-ITF-AF140(2)	8/23/2006	248301	41	U		41	U		57			38	J		470			140			1000			870			620			730			1100			460					
JPM3-ITF-AF141(2)	8/23/2006	248301	36	U		36	U		36	U		30	J		9.2	J		36	U		76			63			39			54			74			37					
JPM3-ITF-AF142(2)	8/23/2006	248301	37	U		37	U		7.5	J		8.2	J		120			27	J		250			190			94			120			140			52					
JPM3-ITF-AP70(1)-D	8/23/2006	248301	39	U		39	U		28	J		28	J		450			91			790			590			280			380			410			190					
JPM3-ITF-AF143(2)	8/24/2006	248327	38	U		38	U		38	U		38	U		64			18	J		180			150			81			120			150			58	J				
JPM3-ITF-AF144(2)	8/24/2006	248327	40	U		40	U		40	U		40	U		11	J		40	U		41			31	J		23	J		34	J		38	J		19	J	J			
JPM3-ITF-AF145(2)	8/24/2006	248327	39	U		39	U		39	U		39	U		37	J		39	U		17	J		130			71			100			110			57	J				
JPM3-ITF-AF146(2)	8/24/2006	248327	40	U		40	U		40	U		40	U		31	J		40	U		11	J		50			19	J		26	J		23	J		13	J	J			
JPM3-ITF-AF147(2)	8/24/2006	248327	38	U		38	U		38	U		38	U		38	U		38	U		10	J		38	U		38	U		38	U		38	U		38	U		38	U	J
JPM3-ITF-AF148(2)	8/24/2006	248327	40	U		40	U		40	U		40	U		40	U		40	U		16	J		11	J		40	U		12	J		16	J		40	U	J			
JPM3-ITF-AP71(1)	8/24/2006	248327	36	U		36	U		36	U		36	U		8.9	J		36	U		13	J		13	J		8.7	J		15	J		18	J		36	U	J			
JPM3-ITF-AP72(1)	8/24/2006	248327	39	U		39	U		39	U		39	U		9.9	J		39	U		14	J		25	J		39	U		39	U		19	J		39	U	J			
JPM3-ITF-AF145(2)-D	8/24/2006	248327	38	U		38	U		9	J		7.9	J		86			29	J		200			180			92			130			130			97	J				
JPM3-ITF-AF149(2)	8/28/2006	248379	47	U		47	U		47	U		47	U		30	J		47	U		32	J		30	J		13	J		11	J		13	J		47	U				

LF - lab flag

J - estimated concentration

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample Identification	Date Sampled	SDG	Benzo(a)pyrene			Indeno(1,2,3-cd)pyrene			Dibenzo(a,h)anthracene			Benzo(ghi)perylene			Monochloronaphthalene			Dichloronaphthalene			Trichloronaphthalene			Tetrachloronaphthalene			Pentachloronaphthalene			Hexachloronaphthalene			Heptachloronaphthalene			Octachloronaphthalene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF						
JPM3-ITF-AF119(2)	8/17/2006	248233	49			37			14	J			44			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF121(2)	8/17/2006	248233	19	J		15	J		45	U			21	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF122(2)	8/17/2006	248233	34	J		28	J		34	U			39			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF123(2)	8/17/2006	248233	35	U		35	U		35	U			35	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF124(2)	8/17/2006	248233	63			49			22	J			60			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP57(1)	8/17/2006	248233	31	J		31	J		37	U			40			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF119(2)-D	8/17/2006	248233	50			36			34	U			43			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP60(1)	8/18/2006	248248	550			400			130				480			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP61(1)	8/18/2006	248248	320			210			100				270			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP63(1)	8/18/2006	248248	1000			620			340				750			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF125(2)	8/21/2006	248271	45			34	J		16	J			38	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF126(2)	8/21/2006	248271	78			60			28	J			67			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF127(2)	8/21/2006	248271	75			53			17	J			58			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF128(2)	8/21/2006	248271	34	U		12	J		34	U			12	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF129(2)	8/21/2006	248271	11	J		12	J		39	U			15	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF130(2)	8/21/2006	248271	38	U		38	U		38	U			38	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF131(2)	8/21/2006	248271	38	U		38	U		38	U			38	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF132(2)	8/21/2006	248271	40	U		40	U		40	U			40	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF133(2)	8/21/2006	248271	40	U		40	U		40	U			40	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF130(2)-D	8/21/2006	248271	38	U		38	U		38	U			38	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP64(1)	8/22/2006	248289	72			49			35	J			65			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP65(1)	8/22/2006	248289	150			110			32	J			140			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP66(1)	8/22/2006	248289	45			35	J		12	J			44			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF134(2)	8/22/2006	248289	24	J		20	J		37	U			23	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF135(2)	8/22/2006	248289	38	U		38	U		38	U			38	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF136(2)	8/22/2006	248289	34	U		34	U		34	U			34	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP67(1)	8/23/2006	248301	20	J		18	J		7.8	J			22	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP68(1)	8/23/2006	248301	190			150			44				170			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP69(1)	8/23/2006	248301	330			200			65				240			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP70(1)	8/23/2006	248301	670			460			150				530			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF137(2)	8/23/2006	248301	12	J		9	J		38	U			12	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF138(2)	8/23/2006	248301	46			30	J		11	J			38			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF139(2)	8/23/2006	248301	38	U		38	U		38	U			38	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF140(2)	8/23/2006	248301	950			650			220				780			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF141(2)	8/23/2006	248301	52			36	J		12	J			45			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF142(2)	8/23/2006	248301	95			59			17	J			71			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP70(1)-D	8/23/2006	248301	290			190			63				220			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF143(2)	8/24/2006	248327	100			71			31	J			86			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF144(2)	8/24/2006	248327	28	J		19	J		40	U			23	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF145(2)	8/24/2006	248327	73			48			22	J			61			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF146(2)	8/24/2006	248327	19	J		12	J		40	U			14	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF147(2)	8/24/2006	248327	38	U		38	U		38	U			38	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF148(2)	8/24/2006	248327	40	U		40	U		40	U			40	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP71(1)	8/24/2006	248327	36	U		11	J		36	U			15	J		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AP72(1)	8/24/2006	248327	39	U		39	U		39	U			39	U		NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF145(2)-D	8/24/2006	248327	100			81			38	U			90			NS			NS			NS			NS			NS			NS			NS				
JPM3-ITF-AF149(2)	8/28/2006	248379	11	J		47	U		47	U			47	U		NS			NS			NS			NS			NS			NS			NS				

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

NS - not sampled

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample Identification	Date Sampled	SDG	Naphthalene			Acenaphthylene			Acenaphthene			Fluorene			Phenanthrene			Anthracene			Fluoranthene			Pyrene			Benzo(a)anthracene			Chrysene			Benzo(b)fluoranthene			Benzo(k)fluoranthene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AF150(2)	8/28/2006	248379	47	U		47	U		47	U		47	U		47	U		47	U		47	U		47	U		47	U		47	U		47	U				
JPM3-ITF-AF151(2)	8/28/2006	248379	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U				
JPM3-ITF-AF152(2)	8/28/2006	248379	45	U		45	U		45	U		45	U		45	U		8.6	J		45	U		45	U		45	U		45	U		45	U				
JPM3-ITF-AF153(2)	8/28/2006	248379	45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U				
JPM3-ITF-AF154(2)	8/28/2006	248379	44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U				
JPM3-ITF-AF155(2)	8/28/2006	248379	45	U		45	U		45	U		45	U		15	J		10	J		22	J		23	J		45	U		45	U		24	J				
JPM3-ITF-AP73(1)	8/28/2006	248379	45	U		45	U		45	U		45	U		14	J		45	U		32	J		26	J		16	J		28	J		46					
JPM3-ITF-AP74(1)	8/28/2006	248379	220	U		220	U		220	U		220	U		220	U		220	U		220	U		220	U		220	U		220	U		220	U				
JPM3-ITF-AF153(2)-D	8/28/2006	248379	43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U				
JPM3-ITF-AF156(2)	8/30/2006	248423	44	U		44	U		44	U		44	U		97			26	J		250			210			130			130			190					
JPM3-ITF-AF157(2)	8/30/2006	248423	40	U		40	U		40	U		40	U		81	U		40	U		40	U		81	U		40	U		40	U		40	U				
JPM3-ITF-AF158(2)	8/30/2006	248423	44	U		44	U		44	U		44	U		89	U		44	J		13	J		11	J		44	U		44	U		13	J				
JPM3-ITF-AF159(2)	8/30/2006	248423	42	U		42	U		42	U		42	U		42	U		24	J		42	U		20	J		12	J		15	J		21	J				
JPM3-ITF-AF160(2)	8/30/2006	248423	42	U		42	U		42	U		42	U		10	J		42	U		27	J		18	J		14	J		17	J		27	J				
JPM3-ITF-AF161(2)	8/30/2006	248423	45			38	U		38	U		38	U		130			18	J		120			81			42			49			65					
JPM3-ITF-AF162(2)	8/30/2006	248423	120	U		120	U		120	U		120	U		29	J		120	U		57	J		50	J		34	J		54	J		69	J				
JPM3-ITF-AF163(2)	8/30/2006	248423	8	J		39	U		39	U		39	U		38	J		8.7	J		65			56	J		44			57			96					
JPM3-ITF-AF164(2)	8/30/2006	248423	44	U		44	U		44	U		44	U		89	U		44	U		44	U		89	U		44	U		44	U		44	U				
JPM3-ITF-AF165(2)	8/30/2006	248423	37	U		7.6	J		37	U		37	U		39	J		14	J		110			87			56			72			120					
JPM3-ITF-AF166(2)	8/30/2006	248423	40	U		40	U		40	U		40	U		82	U		40	U		40	U		82	U		40	U		40	U		40	U				
JPM3-ITF-AF161(2)-D	8/30/2006	248423	39	U		39	U		39	U		39	U		17	J		8.9	J		38	J		35	J		23	J		35	J		54					
JPM3-ITF-AF167(2)	8/31/2006	248439	15	J		39	U		39	U		39	U		13	J		39	U		24	J		41			9.3	J		17	J		39	U				
JPM3-ITF-AP76(1)	8/31/2006	248470	44	U		44	U		44	U		44	U		89	U		44	U		14	J		11	J		44	U		16	J		16	J				
JPM3-UNKNOWN MATER	8/31/2006	248470	1100			340	U		2800			1700			550	J		1200			5400			4800			1200			1000			580					
JPM3-ITF-AP77(1)	9/7/2006	248537	40	U		40	U		40	U		40	U		70			16	J		120			91			46			40	U		46					
JPM3-ITF-AP78(1)	9/7/2006	248537	42	U		42	U		42	U		42	U		42	U		42	U		12	J		11	J		42	U		42	U		42	U				
JPM3-ITF-AF168(2)	9/7/2006	248537	370	U		370	U		370	U		370	U		370	U		370	U		370	U		170	J		370	U		370	U		370	U				
JPM3-ITF-AF171	9/29/2006	248926	39	U		11	J		39	U		39	U		14	J		12	J		73			62			43			62			110					
JPM3-ITF-AF173	9/29/2006	248926	40	U		13	J		40	U		40	U		28	J		14	J		82			60			40			53			99					
JPM3-ITF-AF175	9/29/2006	248926	40	U		38	J		12	J		12	J		150			61	J		370	J		320	J		190			220			370					
JPM3-ITF-AP80	9/29/2006	248926	61	J		18	J		10	J		10	J		190			43			200			220			110			150			220					
JPM3-ITF-AF169	9/29/2006	248926	40	U		40	U		40	U		40	U		40	U		40	U		13	J		11	J		40	U		40	U		40	U				
JPM3-ITF-AF170	9/29/2006	248926	41	J		41	U		41	U		41	U		41	U		41	U		16	J		13	J		41	U		8.9	J		14	J				
JPM3-ITF-AF172	9/29/2006	248926	39	U		39	U		39	U		39	U		16	J		39	U		37	J		34	J		17	J		24	J		29	J				
JPM3-ITF-AF176	9/29/2006	248926	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U				
JPM3-ITF-AF177	9/29/2006	248926	8.7	J		37	U		37	U		8.1	J		33	J		8.4	J		36	J		37			19	J		23	J		33	J				
JPM3-ITF-AF178	9/29/2006	248926	43	U		43	U		43	U		43	U		43	U		43	U		8.7	J		43	U		43	U		43	U		13	J				
JPM3-ITF-AF179	9/29/2006	248926	41	U		41	U		41	U		41	U		10	J		41	U		30	J		48			31	J		40	J		65					
JPM3-ITF-AF180(2)	10/3/2006	248981	45	U		45	U		45	U		45	U		45	U		45	U		16	J		15	J		11	J		15	J		24	J				
JPM3-ITF-AF181(2)	10/3/2006	248981	47	U		29	J		47	U		11	J		130			37	J		280			300			180			220			320					
JPM3-ITF-AF182(2)	10/3/2006	248981	44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U				
JPM3-ITF-AF183(2)	10/3/2006	248981	43	U		69			43	U		43	U		51			47			280			330			230			350			490					
JPM3-ITF-AF184(2)	10/3/2006	248981	46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U				
JPM3-ITF-AF185(2)	10/3/2006	248981	47	U		47	U		47	U		47	U		47	U		47	U		19	J		19	J		12	J		19	J		23	J				
JPM3-ITF-AF186(2)	10/3/2006	248981	45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U				
JPM3-ITF-AF187(2)	10/3/2006	248981	44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U				
JPM3-ITF-AF188(2)	10/3/2006	248981	41	U		41	U		41	U		41	U		9.4	J		41	U		27	J		27	J		15	J		23	J		33	J				

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

NS - not sampled

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample Identification	Date Sampled	SDG	Benzo(a)pyrene			Indeno(1,2,3-cd)pyrene			Dibenzo(a,h)anthracene			Benzo(ghi)perylene			Monochloronaphthalene			Dichloronaphthalene			Trichloronaphthalene			Tetrachloronaphthalene			Pentachloronaphthalene			Hexachloronaphthalene			Heptachloronaphthalene			Octachloronaphthalene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AF150(2)	8/28/2006	248379	47	U		47	U		47	U		47	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF151(2)	8/28/2006	248379	42	U		42	U		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF152(2)	8/28/2006	248379	45	U		45	U		45	U		45	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF153(2)	8/28/2006	248379	45	U		45	U		45	U		45	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF154(2)	8/28/2006	248379	44	U		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF155(2)	8/28/2006	248379	45	U		15	J		45	U		45	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AP73(1)	8/28/2006	248379	19	J		19	J		45	U		25	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AP74(1)	8/28/2006	248379	220	U		220	U		220	U		220	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF153(2)-D	8/28/2006	248379	43	U		43	U		43	U		43	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF156(2)	8/30/2006	248423	130	U		80	U		25	J		94	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF157(2)	8/30/2006	248423	40	U		40	U		40	U		40	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF158(2)	8/30/2006	248423	8.5	J		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF159(2)	8/30/2006	248423	14	J		9	J		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF160(2)	8/30/2006	248423	17	J		11	J		42	U		13	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF161(2)	8/30/2006	248423	30	J		18	J		38	U		20	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF162(2)	8/30/2006	248423	43	J		36	J		120	U		41	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF163(2)	8/30/2006	248423	69	U		43	U		13	J		50	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF164(2)	8/30/2006	248423	44	U		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF165(2)	8/30/2006	248423	80	U		59	U		37	U		70	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF166(2)	8/30/2006	248423	40	U		40	U		40	U		40	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF161(2)-D	8/30/2006	248423	26	J		20	J		39	U		23	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF167(2)	8/31/2006	248439	39	U		39	U		39	U		18	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AP76(1)	8/31/2006	248470	11	J		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-UNKNOWN MATERIAL	8/31/2006	248470	460	U		130	J		340	U		340	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AP77(1)	9/7/2006	248537	47	U		34	J		40	U		33	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AP78(1)	9/7/2006	248537	42	U		42	U		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF168(2)	9/7/2006	248537	370	U		370	U		370	U		370	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF171	9/29/2006	248926	50	U		35	J		39	U		38	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF173	9/29/2006	248926	51	U		33	J		11	J		36	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF175	9/29/2006	248926	220	U		150	U		43	U		180	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AP80	9/29/2006	248926	130	U		100	U		44	U		150	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF169	9/29/2006	248926	40	U		40	U		40	U		40	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF170	9/29/2006	248926	8	J		41	U		41	U		41	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF172	9/29/2006	248926	18	J		14	J		39	U		14	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF176	9/29/2006	248926	42	U		42	U		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF177	9/29/2006	248926	21	J		16	J		37	U		20	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF178	9/29/2006	248926	43	U		43	U		43	U		43	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF179	9/29/2006	248926	52	U		34	J		11	J		60	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF180(2)	10/3/2006	248981	16	J		14	J		45	U		18	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF181(2)	10/3/2006	248981	220	U		140	J		48	J		160	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF182(2)	10/3/2006	248981	44	U		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF183(2)	10/3/2006	248981	340	U		240	J		66	J		310	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF184(2)	10/3/2006	248981	46	U		46	U		46	U		46	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF185(2)	10/3/2006	248981	19	J		14	J		47	U		18	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF186(2)	10/3/2006	248981	45	U		45	U		45	U		45	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF187(2)	10/3/2006	248981	44	U		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			
JPM3-ITF-AF188(2)	10/3/2006	248981	20	J		16	J		41	U		21	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS			

LF - lab flag
J - estimated concentration
ug/kg - micrograms per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 13 of 22)

Sample Identification	Date Sampled	SDG	Naphthalene			Acenaphthylene			Acenaphthene			Fluorene			Phenanthrene			Anthracene			Fluoranthene			Pyrene			Benzo(a)anthracene			Chrysene			Benzo(b)fluoranthene			Benzo(k)fluoranthene					
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF						
JPM3-ITF-AF189(2)	10/3/2006	248981	44	U	J	44	U		44	U		44	U		44	U		44	U		15	J		14	J		9.8	J		10	J		16	J		44	U				
JPM3-ITF-AF190(2)	10/3/2006	248981	46	U	J	46	U		46	U		46	U		46	U		46	U		20	J		24	J		14	J		24	J		35	J		22	J				
JPM3-ITF-AF191(2)	10/3/2006	248981	48	U	J	48	U		48	U		48	U		48	U		48	U		48	U		48	U		48	U		48	U		48	U		48	U				
JPM3-ITF-AP81(1)	10/3/2006	248981	46	U		46	U		46	U		46	U		9.4	J		46	U		23	J		20	J		10	J		20	J		24	J		46	U				
JPM3-ITF-AP82(1)	10/3/2006	248981	25	J		19	J		24	J		22	J		420			100			820			950			570			740			1100			380					
JPM3-ITF-AP83(1)	10/3/2006	248981	42	U		42	U		42	U		42	U		53			12	J		160			130			84			110			150			34	J				
JPM3-ITF-AF186(2)-D	10/3/2006	248981	44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U				
JPM3-ITF-AF192(2)	10/5/2006	249025	42	U	J	42	U		42	U		42	U		42	U		42	U		15	J		13	J		19	J		22	J		33	J		25	J	J			
JPM3-ITF-AF193(2)	10/5/2006	249025	43	U	J	43	U		43	U		43	U		43	U		43	U		43	U		43	U		11	J		14	J		25	J		24	J	J			
JPM3-ITF-AF194(2)	10/5/2006	249025	13	J	J	43	U		43	U		43	U		39	J		43	U		91			95			49			63			96			47	J	J			
JPM3-ITF-AF195(2)	10/5/2006	249025	43	U	J	43	U		43	U		43	U		36	J		43	U		12	J		110			100			86			96			160			88	J	
JPM3-ITF-AF196(2)	10/5/2006	249025	42	U	J	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		18	J		13	J	J			
JPM3-ITF-AF197(2)	10/5/2006	249025	42	U	J	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U				
JPM3-ITF-AF198(2)	10/5/2006	249025	40	U	J	40	U		40	U		40	U		20	J		40	U		64			54			37	J		43			67			23	J	J			
JPM3-ITF-AF199(2)	10/5/2006	249025	41	U	J	41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U				
JPM3-ITF-AF200(2)	10/5/2006	249025	44	U	J	44	U		44	U		44	U		32	J		36	J		87			94			61			65			120			26	J	J			
JPM3-ITF-AF201(2)	10/5/2006	249025	44	U	J	44	U		44	U		44	U		44	U		44	U		22	J		21	J		18	J		19	J		34	J		17	J	J			
JPM3-ITF-AF202(2)	10/5/2006	249025	42	U	J	42	U	J	42	U	J	42	U	J	42	U	J	42	U	J	10	J	J	42	U	J	42	U	J	42	U	J	13	J	J	42	U	J			
JPM3-ITF-AP85(2)	10/5/2006	249025	45	U	J	16	J		45	U		45	U		70			24	J		190			170			110			170			260			110	J				
JPM3-ITF-AF195(2)-D	10/5/2006	249025	42	U	J	42	U		42	U		42	U		24	J		11	J		63			58			43			60			93			44	J				
JPM3-ITF-AF204(2)	10/9/2006	249072	40	U	J	40	U		40	U		40	U		40	U		40	U		15	J		22	J		13	J		14	J		18	J		12	J	J			
JPM3-ITF-AF205(2)	10/9/2006	249072	38	U	J	38	U		38	U		38	U		32	J		38	U		80			68			46			55			77			42	J				
JPM3-ITF-AF206(2)	10/9/2006	249072	37	U	J	37	U		37	U		37	U		23	J		37	U		51			44			37			50			69			32	J	J			
JPM3-ITF-AF207(2)	10/9/2006	249072	13	J	J	41	U		30	J		25	J		270			53			350			270			120			140			160			66	J	J			
JPM3-ITF-AF208(2)	10/9/2006	249072	39	U	J	39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U	J			
JPM3-ITF-AF209(2)	10/9/2006	249072	10	J	J	9.9	J		9.5	J		11	J		150			49			390			350			280			280			470			160	J				
JPM3-ITF-AF211(2)	10/9/2006	249072	40	U	J	40	U		140			130			1600			420			2500			2100			1300			1200			1400			690	J				
JPM3-ITF-AP86(1)	10/9/2006	249072	45	U	J	45	U		45	U		45	U		45	U		45	U		17	J		16	J		19	J		25	J		34	J		15	J	J			
JPM3-ITF-AP87(1)	10/9/2006	249072	40	U	J	40	U		40	U		40	U		50			16	J		130			110			80			130			170			74	J				
JPM3-ITF-AP88(1)	10/9/2006	249072	42	U	J	42	U		42	U		42	U		42	J		9.5	J		110			95			59			95			120			60	J				
JPM3-ITF-AP89(1)	10/9/2006	249072	51	J		11	J		74			87			1000			190			1800			1200			740			890			1100			370	J				
JPM3-ITF-AF204(2)-D	10/9/2006	249072	37	U	J	37	U		37	U		37	U		37	U		37	U		13	J		12	J		8.6	J		10	J		14	J		37	U	J			
JPM3-ITF-AF213(2)	10/17/2006	249177	45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U				
JPM3-ITF-AF214(2)	10/17/2006	249177	47	U		11	J		47	U		47	U		47	U		47	U		47	U		47	U		47	U		47	U		25	J		20	J				
JPM3-ITF-AF215(2)	10/17/2006	249177	46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U				
JPM3-ITF-AF216(2)	10/17/2006	249177	40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U				
JPM3-ITF-AF217(2)	10/17/2006	249177	47	U		47	U		47	U		47	U		47	U		47	U		15	J		12	J		9.9	J		13	J		17	J		47	U				
JPM3-ITF-AF218(2)	10/17/2006	249177	43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		24	J		17	J				
JPM3-ITF-AF213-9(2)	10/17/2006	249177	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U				
JPM3-ITF-AF213--20(2)	10/17/2006	249177	42	U		42	U		18	J		27	J		270			57			430			280			150			170			170			140					
JPM3-ITF-AF221(2)	10/17/2006	249177	44	U		44	U		44	U		44	U		44	U		44	U		10	J		44	U		44	U		44	U		44	U		44	U				
JPM3-ITF-AP90(1)	10/17/2006	249177	20	J		44	U		12	J		17	J		390			91			1200			840			610			740			800			720					
JPM3-ITF-AP91(1)	10/17/2006	249177	45	U		45	U		10	J		13	J		230			49			540			370			240			330			410			220					
JPM3-ITF-AF221(2)-D	10/17/2006	249177	43	U		43	U		43	U		43	U		43	U		43	U		23	J		17	J		16	J		18	J		22	J		24	J				
JPM3-ITF-AF222(2)	10/20/2006	249240	44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U				
JPM3-ITF-AF223(2)	10/20/2006	249240	40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U				
JPM3-ITF-AF224(2)	10/20/2006	249240	45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U				

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample Identification	Date Sampled	SDG	Benzo(a)pyrene			Indeno(1,2,3-cd)pyrene			Dibenzo(a,h)anthracene			Benzo(ghi)perylene			Monochloronaphthalene			Dichloronaphthalene			Trichloronaphthalene			Tetrachloronaphthalene			Pentachloronaphthalene			Hexachloronaphthalene			Heptachloronaphthalene			Octachloronaphthalene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AF189(2)	10/3/2006	248981	11	J	J	44	U	J	44	U	J	44	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF190(2)	10/3/2006	248981	24	J	J	21	J	J	46	U	J	26	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF191(2)	10/3/2006	248981	48	U	J	48	U	J	48	U	J	48	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP81(1)	10/3/2006	248981	14	J	J	13	J	J	46	U	J	16	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP82(1)	10/3/2006	248981	670	J	J	460	J	J	130	J	J	790	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP83(1)	10/3/2006	248981	83	J	J	57	J	J	13	J	J	69	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF186(2)-D	10/3/2006	248981	44	U	J	44	U	J	44	U	J	44	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF192(2)	10/5/2006	249025	24	J	J	14	J	J	10	J	J	15	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF193(2)	10/5/2006	249025	21	J	J	13	J	J	11	J	J	14	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF194(2)	10/5/2006	249025	65	J	J	42	J	J	21	J	J	49	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF195(2)	10/5/2006	249025	110	J	J	80	J	J	27	J	J	100	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF196(2)	10/5/2006	249025	18	J	J	16	J	J	12	J	J	17	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF197(2)	10/5/2006	249025	42	U	J	42	U	J	42	U	J	42	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF198(2)	10/5/2006	249025	41	J	J	34	J	J	11	J	J	42	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF199(2)	10/5/2006	249025	41	U	J	41	U	J	41	U	J	41	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF200(2)	10/5/2006	249025	76	J	J	55	J	J	26	J	J	66	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF201(2)	10/5/2006	249025	22	J	J	21	J	J	9.4	J	J	25	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF202(2)	10/5/2006	249025	42	U	J	42	U	J	42	U	J	42	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP85(2)	10/5/2006	249025	140	J	J	110	J	J	47	J	J	140	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF195(2)-D	10/5/2006	249025	58	J	J	43	J	J	18	J	J	53	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF204(2)	10/9/2006	249072	13	J	J	14	J	J	40	U	J	15	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF205(2)	10/9/2006	249072	50	J	J	42	J	J	11	J	J	51	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF206(2)	10/9/2006	249072	37	J	J	32	J	J	14	J	J	38	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF207(2)	10/9/2006	249072	110	J	J	72	J	J	31	J	J	87	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF208(2)	10/9/2006	249072	39	U	J	39	U	J	39	U	J	39	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF209(2)	10/9/2006	249072	310	J	J	230	J	J	84	J	J	290	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF211(2)	10/9/2006	249072	1100	J	J	710	J	J	270	J	J	860	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP86(1)	10/9/2006	249072	20	J	J	12	J	J	45	U	J	15	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP87(1)	10/9/2006	249072	96	J	J	77	J	J	20	J	J	100	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP88(1)	10/9/2006	249072	71	J	J	57	J	J	17	J	J	75	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP89(1)	10/9/2006	249072	640	J	J	440	J	J	180	J	J	510	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF204(2)-D	10/9/2006	249072	10	J	J	37	U	J	37	U	J	37	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF213(2)	10/17/2006	249177	12	J	J	17	J	J	17	J	J	45	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF214(2)	10/17/2006	249177	36	J	J	190	J	J	190	J	J	240	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF215(2)	10/17/2006	249177	46	U	J	46	U	J	46	U	J	46	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF216(2)	10/17/2006	249177	40	U	J	40	U	J	40	U	J	40	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF217(2)	10/17/2006	249177	11	J	J	47	U	J	47	U	J	47	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF218(2)	10/17/2006	249177	22	J	J	16	J	J	13	J	J	43	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF213-9(2)	10/17/2006	249177	42	U	J	11	J	J	10	J	J	42	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF213--20(2)	10/17/2006	249177	140	J	J	100	J	J	52	J	J	100	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF221(2)	10/17/2006	249177	44	U	J	13	J	J	10	J	J	44	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP90(1)	10/17/2006	249177	660	J	J	520	J	J	170	J	J	49	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AP91(1)	10/17/2006	249177	290	J	J	200	J	J	67	J	J	250	J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF221(2)-D	10/17/2006	249177	19	J	J	18	J	J	43	U	J	43	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF222(2)	10/20/2006	249240	44	U	J	44	U	J	44	U	J	44	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF223(2)	10/20/2006	249240	40	U	J	40	U	J	40	U	J	40	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
JPM3-ITF-AF224(2)	10/20/2006	249240	45	U	J	45	U	J	45	U	J	45	U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

NS - not sampled

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample Identification	Date Sampled	SDG	Naphthalene			Acenaphthylene			Acenaphthene			Fluorene			Phenanthrene			Anthracene			Fluoranthene			Pyrene			Benzo(a)anthracene			Chrysene			Benzo(b)fluoranthene			Benzo(k)fluoranthene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AF225(2)	10/20/2006	249240	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U				
JPM3-ITF-AF226(2)	10/20/2006	249240	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U				
JPM3-ITF-AF227(2)	10/20/2006	249240	42	U	J	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U				
JPM3-ITF-AF228(2)	10/20/2006	249240	43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U				
JPM3-ITF-AF229(2)	10/20/2006	249240	43	U		43	U		43	U		43	U	19	J		43	U	51		39	J		25	J		24	J		31	J		31	J				
JPM3-ITF-AF230(2)	10/20/2006	249240	44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U				
JPM3-ITF-AF231(2)	10/20/2006	249240	42	U		11	J		42	U		42	U	140		38	J		350		260		180		180		180		230									
JPM3-ITF-AF232(2)	10/20/2006	249240	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U				
JPM3-ITF-AF233(2)	10/20/2006	249240	46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U		46	U				
JPM3-ITF-AF234(2)	10/20/2006	249240	44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U				
JPM3ITFCP1-1(1)	11/1/2006	249398	13	J		9.5	J		11	J		11	J		180		52		360		360		210		260		380		75									
JPM3ITFCP1-2(1)	11/1/2006	249398	44	U		40	U		160		190		2000		590		5300		4400		1900		2700		3100		1400											
JPM3ITFCP1-3(1)	11/1/2006	249398	38	U		38	U		38	U		38	U		84		19	J		170		160		92		140		160		60								
JPM3ITFCP1-4(1)	11/1/2006	249398	44	U		44	U		44	U		44	U		50		14	J		95		72		38	J		39	J		53		26	J					
JPM3ITFCP1-5(1)	11/1/2006	249398	36	U		36	U		36	U		10	J		36	U		22	J		23	J		12	J		36	U		21	J		10	J				
JPM3ITFCP1-6(1)	11/1/2006	249398	50	U		7.8	J		11	J		9	J		110		27	J		180		150		80		120		150		59								
JPM3ITFCP1-7(1)	11/1/2006	249398	120	U		110	U		190	U		210	U		2100	U		600	U		3900	U		2900	U		1800	U		2200	U		2800	U		1300	U	
JPM3ITFCP1-8(1)	11/1/2006	249398	220	U		170	U		470	U		590	U		6900	U		1800	U		15000	U		12000	U		8100	U		11000	U		13000	U		4700	U	
JPM3ITFCP1-9(1)	11/1/2006	249398	170	U		290	U		270	U		360	U		2500	U		800	U		3800	U		3500	U		1900	U		2600	U		3000	U		1600	U	
JPM3ITFCP110(1)	11/1/2006	249398	57	U		370	U		72	U		100	U		930	U		530	U		2500	U		2300	U		1700	U		2200	U		2600	U		1600	U	
JPM3ITFCP111(1)	11/1/2006	249398	68	U		200	U		63	U		79	U		500	U		290	U		1200	U		1300	U		880	U		1300	U		2100	U		650	U	
JPM3ITFCP112(1)	11/1/2006	249398	39	U		190	U		85	U		88	U		970	U		480	U		3200	U		3000	U		2000	U		2900	U		3100	U		2000	U	
JPM3ITFCP113(1)	11/1/2006	249398	600	U		290	U		450	U		660	U		4800	U		1300	U		7300	U		6600	U		3900	U		5200	U		6400	U		2700	U	
JPM3ITFCP114(1)	11/1/2006	249398	45	U		230	U		82	U		100	U		880	U		480	U		2300	U		2300	U		1500	U		2000	U		2500	U		960	U	
JPM3ITFCP115(1)	11/1/2006	249398	44	U		430	U		99	U		120	U		1200	U		810	U		5100	U		5000	U		2600	U		5100	U		5200	U		2400	U	
JPM3ITFCP116(1)	11/1/2006	249398	26	J		160	U		59	U		55	U		680	U		350	U		1600	U		1600	U		910	U		1300	U		1700	U		750	U	
JPM3ITFCP117(1)	11/1/2006	249398	23	J		180	U		48	U		53	U		520	U		340	U		1400	U		1400	U		980	U		1300	U		2100	U		340	U	
JPM3ITFCP118(1)	11/1/2006	249398	20	J		32	J		54	U		64	U		780	U		230	U		1200	U		1300	U		590	U		780	U		800	U		440	U	
JPM3ITFCP119(1)	11/1/2006	249398	47	U		47	U		47	U		47	U	22	J		47	U		47	U		38	J		24	J		27	J		43	J		14	J		
JPM3ITFCP120(1)	11/1/2006	249398	27	J		18	J		10	J		14	J		250	U		76	U		670	U		500	U		320	U		530	U		710	U		220	U	
JPM3ITFCP121(1)	11/1/2006	249398	46	U		46	U		46	U		46	U		39	J		46	U		93	U		80	U		54	U		60	U		86	U		41	J	
JPM3-ITF-AF235(2)	11/3/2006	249439	44	U		44	U		44	U		44	U		15	J		44	U		37	J		33	J		21	J		44	U		26	J		44	U	
JPM3-ITF-AF236(2)	11/3/2006	249439	15	J		24	J		27	J		25	J		380	U		110	U		940	J		810	U		490	U		510	U		580	U		310	U	
JPM3-ITF-AF237(2)	11/3/2006	249439	44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U	
JPM3-ITF-AF238(2)	11/3/2006	249439	44	U		44	U		44	U		44	U		44	U		44	U		9.5	J		44	U		44	U		44	U		44	U		44	U	
JPM3-ITF-AF239(2)	11/3/2006	249439	44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U	
JPM3-ITF-AF240(2)	11/3/2006	249439	42	U		42	U		42	U		42	U		42	U		42	U		17	J		18	J		11	J		42	U		16	J		42	U	
JPM3-ITF-AF241(2)	11/3/2006	249439	42	U		42	U		42	U		42	U		42	U		42	U		18	J		15	J		11	J		42	U		16	J		42	U	
JPM3-ITF-AF242(2)	11/8/2006	249487	42	U		42	U		42	U		42	U		11	J		42	U		22	J		17	J		12	J		42	U		15	J		42	U	
JPM3-ITF-AF243(2)	11/8/2006	249487	44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U	
JPM3-ITF-AF244(2)	11/8/2006	249487	42	U	J	42	U	J	42	U	J	42	U	J	42	U	J	42	U	J	12	J	J	42	U	J	42	U	J	42	U	J	42	U	J	42	U	J
JPM3-ITF-AF245(2)	11/8/2006	249487	42	U		42	U		42	U		42	U		9	J		42	U		18	J		16	J		8.5	J		42	U		14	J		42	U	
JPM3-ITF-AF246(2)	11/8/2006	249487	44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U	
JPM3-ITF-AF247(2)	11/8/2006	249487	43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U		43	U	
JPM3-ITF-AP92(2)	11/8/2006	249487	41	U		41	U		41	U		41	U		20	J		41	U		47	U		43	U		28	J		23	J		42	U		25	J	
JPM3-ITF-AP93(2)	11/8/2006	249487	40	U		40	U		40	U		40	U		16	J		40	U		25	J		21	J		12	J		9	J		25	J		14	J	
JPM3-ITF-AF244(2)-D	11/8/2006	249487	42	U		42	U		42	U		42	U		42	U		42	U		9.6	J		42	U		42	U		42	U		42	U		42	U	

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample Identification	Date Sampled	SDG	Benzo(a)pyrene			Indeno(1,2,3-cd)pyrene			Dibenzo(a,h)anthracene			Benzo(ghi)perylene			Monochloronaphthalene			Dichloronaphthalene			Trichloronaphthalene			Tetrachloronaphthalene			Pentachloronaphthalene			Hexachloronaphthalene			Heptachloronaphthalene			Octachloronaphthalene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AF225(2)	10/20/2006	249240	42	U		42	U		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF226(2)	10/20/2006	249240	42	U		42	U		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF227(2)	10/20/2006	249240	42	U		42	U		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF228(2)	10/20/2006	249240	43	U		43	U		43	U		43	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF229(2)	10/20/2006	249240	39	J		30	J		10	J		19	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF230(2)	10/20/2006	249240	44	U		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF231(2)	10/20/2006	249240	210			150			42			170			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF232(2)	10/20/2006	249240	42	U		42	U		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF233(2)	10/20/2006	249240	46	U		46	U		46	U		46	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF234(2)	10/20/2006	249240	44	U		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP1-1(1)	11/1/2006	249398	230			160			64			200			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP1-2(1)	11/1/2006	249398	2000			1300			660			1400			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP1-3(1)	11/1/2006	249398	100			76			26			89			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP1-4(1)	11/1/2006	249398	40	J		24	J		9.5	J		32	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP1-5(1)	11/1/2006	249398	14	J		12	J		36	U		15	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP1-6(1)	11/1/2006	249398	100			70			19	J		79			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP1-7(1)	11/1/2006	249398	2100			1400			610			1600			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP1-8(1)	11/1/2006	249398	9300			5800			2300			6400			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP1-9(1)	11/1/2006	249398	2100			1400			670			1600			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP110(1)	11/1/2006	249398	1800			1300			520			1300			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP111(1)	11/1/2006	249398	1300			870			240			910			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP112(1)	11/1/2006	249398	2100			260			670			1600			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP113(1)	11/1/2006	249398	4400			2500			1400			2700			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP114(1)	11/1/2006	249398	1600			1100			510			1200			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP115(1)	11/1/2006	249398	2500			1600			900			1700			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP116(1)	11/1/2006	249398	1200			860			400			930			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP117(1)	11/1/2006	249398	1100			780			190			830			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP118(1)	11/1/2006	249398	630			400			84			440			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP119(1)	11/1/2006	249398	28	J		21	J		9.9	J		26	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP120(1)	11/1/2006	249398	360			270			98			300			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3ITFCP121(1)	11/1/2006	249398	64			43	J		13	J		53			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF235(2)	11/3/2006	249439	20	J		17	J		44	U		20	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF236(2)	11/3/2006	249439	440			270			100			310			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF237(2)	11/3/2006	249439	44	U		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF238(2)	11/3/2006	249439	44	U		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF239(2)	11/3/2006	249439	44	U		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF240(2)	11/3/2006	249439	11	J		42	U		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF241(2)	11/3/2006	249439	11	J		42	U		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF242(2)	11/8/2006	249487	42	U		9.6	J		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF243(2)	11/8/2006	249487	44	U		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF244(2)	11/8/2006	249487	42	U		42	U	J	42	U	J	42	U	J	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF245(2)	11/8/2006	249487	42	U		8.9	J		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF246(2)	11/8/2006	249487	44	U		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF247(2)	11/8/2006	249487	43	U		43	U		43	U		43	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AP92(2)	11/8/2006	249487	31	J		25	J		11	J		32	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AP93(2)	11/8/2006	249487	15	J		15	J		40	U		19	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF244(2)-D	11/8/2006	249487	42	U		42	U		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

NS - not sampled

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample Identification	Date Sampled	SDG	Naphthalene			Acenaphthylene			Acenaphthene			Fluorene			Phenanthrene			Anthracene			Fluoranthene			Pyrene			Benzo(a)anthracene			Chrysene			Benzo(b)fluoranthene			Benzo(k)fluoranthene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AP98(1)	12/27/2006	249944	46	U	J	46	U		46	U		46	U		22	J		46	U		58		44	J		36	J		44	J		46	J		30	J		
JPM3-ITF-AP99(1)	12/27/2006	249944	44	U	J	44	U		44	U		44	U		58		14	J		150		44	U		130		85		120		140		140		61			
JPM3-ITF-AF249(3)	12/27/2006	249944	44	U	J	44	U		44	U		44	U		44	U		44	U		13	J		44	U		44	U		11	J		15	J		44	U	
JPM3-ITF-AF250(3)	12/27/2006	249944	43	U	J	15	J		43	U		43	U		84		36	J		270		220		170		180		220		220		120		120				
JPM3-ITF-AF251(3)	12/27/2006	249944	41	U	J	41	U		41	U		41	U		41	U		25	J		23	J		16	J		23	J		36	J		15	J		15	J	
JPM3-ITF-AF252(3)	12/27/2006	249944	22	J		22	J		63			43			1400		380		2300		2100		1500		1500		1300		1100		1100		1100		1100			
JPM3-ITF-AF253(3)	12/27/2006	249944	47	U		47	U		10	J		47	U		110		71		320		310		260		310		260		440		320		230		230			
JPM3-ITF-AF254(3)	12/27/2006	249944	48	U	J	16	J		10	J		48	U		150		46	J		340		260		210		230		270		270		170		170		170		
JPM12-AF4(2)	11/15/2006	249563	45	U		45	U		36	J		31	J		32	J		18	J		33	J		28	J		45	U		45	U		45	U		45	U	
JPM3-ITF-AP255(2)	11/30/2006	250165	44	U	J	44	U	J	44	U		44	U		44	U		44	U		44	U		44	U		44	U	J	44	U		44	U	J	44	U	J
JPM3-ITF-AP256(2)	11/30/2006	250165	44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U		44	U	
JPM3-ITF-AP257(2)	11/30/2006	250165	45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U		45	U	
JPM3-ITF-AP258(2)	11/30/2006	250165	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U	
JPM3-ITF-AF259(2)	2/1/2006	250183	41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U	
JPM3-ITF-AF260(2)	2/1/2006	250183	48	U		48	U		48	U		48	U		48	U		48	U		19	J		17	J		16	J		18	J		24	J		18	J	J
JPM3-ITF-AP100(1)	2/1/2006	250183	43	U		43	U		43	U		43	U		15	J		43	U		76		35	J		25	J		40	J		33	J		31	J	J	
JPM3-ITF-A101(1)	2/1/2006	250183	46	U		46	U		46	U		46	U		46	U		46	U		18	J		46	U		46	U		46	U		46	U		46	U	
JPM3-ITF-A102(1)	2/1/2006	250183	46	U		46	U		46	U		46	U		46	U		46	U		44	J		31	J		21	J		26	J		20	J		24	J	J
JPM3-ITF-AP86(1)	2/2/2006	250192	48	U		48	U		48	U		48	U		48	U		48	U		48	U		48	U		48	U		48	U		48	U		48	U	
JPL2-PF1(2)	5/17/2007	500-4270	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPL2-PF2(2)	5/17/2007	500-4270	41	J		41	U		11	J		18	J		57		41	U		41	U		41	U		9.6	J		41	U		41	U		41	U		
JPL2-PF3(2)	5/17/2007	500-4270	39	U		39	U		280			410			870		39	U		39	U		130		39	U		23		16	J		39	U		39	U	
JPL2-AST-TF1(3)	5/21/2007	500-4317	42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U		42	U	
JPL2-AST-TF2(4)	5/21/2007	500-4317	400	U		400	U		280	J		710			670		160	J		400	U		130	J		140	J		130	J		170	J		170	J	J	
JPL2-AST-TP1(0.5)	5/21/2007	500-4317	34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U	
JPL2-AST-TP2(0.5)	5/21/2007	500-4317	170	U		170	U		170	U		170	U		170	U		170	U		170	U		170	U		170	U		170	U		170	U		170	U	
JPL2-AST-TP3(0.5)	5/21/2007	500-4317	140	U		140	U		140	U		140	U		140	U		140	U		140	U		140	U		140	U		140	U		140	U		140	U	
JPL2-PF5(4)	5/29/2007	500-4427	41	U		41	U		300			770			580		290		170		320		26	J		39	J		41	U		41	U		41	U		
JPL2-PF6(4)	5/29/2007	500-4427	34	U		34	U		120			270			400		70		34	U		39		34	U		34	U		34	U		34	U		34	U	
JPL2-TP4(1)	5/31/2007	500-4472	350	U		350	U		350	U		350	U		350	U		350	U		350	U		350	U		350	U		350	U		350	U		350	U	
JPL2-TP5(1)	5/31/2007	500-4472	340	U		340	U		340	U		340	U		340	U		340	U		140	J		140	J		86	J		130	J		120	J		180	J	
JPL2-TP6(1)	5/31/2007	500-4472	36	U		36	U		36	U		36	U		36	U		36	U		36	U		36	U		14	J		20	J		23	J		26	J	
JPL2-TF3(5)	5/31/2007	500-4472	37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		12	J		14	J		24	J		21	J	
JPL2-TF4(7)	5/31/2007	500-4472	720			38	U		56			210			430		38	U		38	U		13	J		38	U		38	U		38	U		38	U		
JPL3-GENFILL	7/30/2007	500-5635	34	U		34	U		34	U		34	U		34	U		34	U		34	U		8.5	J		34	U		9.2	J		13	J		8.2	J	
JPL3-Topsoil	7/30/2007	500-5635	39	U		39	U		39	U		39	U		21	J		39	U		42		50		27	J		38	J		57		16	J		16	J	
JP-Borrowsource Clay 1	10/9/2007	500-7048	39	U		39	U		39	U		39	U		39	U		39	U		39	U		13	J		15	J		39	U		39	U		39	U	
JPL7-Fill Borrow Source	10/17/2007	500-7227	36	U		36	U		36	U		36	U		36	U		36	U		9.4	J		13	J		17	J		12	J		12	J		36	U	
JPL5-A1(1)	1/2/2007	250108	NS			NS			NS			NS			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
JPL5-A2(1)	1/2/2007	250108	NS			NS			NS			NS			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
JPL5-A3(1)	1/2/2007	250108	NS			NS			NS			NS			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
JPL5-A(41)	1/2/2007	250108	NS			NS			NS			NS			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
JPL5-A5(1)	1/2/2007	250108	NS			NS			NS			NS			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
JPL5-B1(1)	1/2/2007	250108	NS			NS			NS			NS			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
JPL5-B2(1)	1/2/2007	250108	NS			NS			NS			NS			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
JPL5-B3(1)	1/2/2007	250108	NS			NS			NS			NS			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	
JPL5-B4(1)	1/2/2007	250108	NS			NS			NS			NS			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	

LF - lab flag
J - estimated concentration
ug/kg - micrograms per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 18 of 22)

Sample Identification	Date Sampled	SDG	Benzo(a)pyrene			Indeno(1,2,3-cd)pyrene			Dibenzo(a,h)anthracene			Benzo(ghi)perylene			Monochloronaphthalene			Dichloronaphthalene			Trichloronaphthalene			Tetrachloronaphthalene			Pentachloronaphthalene			Hexachloronaphthalene			Heptachloronaphthalene			Octachloronaphthalene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-ITF-AP98(1)	12/27/2006	249944	36	J		25	J		14	J		31	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AP99(1)	12/27/2006	249944	86			64			33	J		84			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF249(3)	12/27/2006	249944	10	J		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF250(3)	12/27/2006	249944	160			120			46			140			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF251(3)	12/27/2006	249944	24	J		17	J		9.4	J		19	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF252(3)	12/27/2006	249944	1200			780			340			830			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF253(3)	12/27/2006	249944	300			190			59			220			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF254(3)	12/27/2006	249944	220			130			68			170			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM12-AF4(2)	11/15/2006	249563	45	U		45	U		45	U		45	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AP255(2)	11/30/2006	250165	44	U	J	44	U	J	44	U	J	44	U	J	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AP256(2)	11/30/2006	250165	44	U		44	U		44	U		44	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AP257(2)	11/30/2006	250165	45	U		45	U		45	U		45	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AP258(2)	11/30/2006	250165	42	U		42	U		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF259(2)	2/1/2006	250183	41	U		41	U		41	U		41	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AF260(2)	2/1/2006	250183	16	J		48	U		48	U		21	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AP100(1)	2/1/2006	250183	33	J		26	J		43	U		35	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-A101(1)	2/1/2006	250183	46	U		46	U		46	U		11	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-A102(1)	2/1/2006	250183	20	J		46	U		46	U		26	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPM3-ITF-AP86(1)	2/2/2006	250192	48	U		48	U		48	U		48	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-PF1(2)	5/17/2007	500-4270	38	U		38	U		38	U		38	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-PF2(2)	5/17/2007	500-4270	41	U		41	U		41	U		41	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-PF3(2)	5/17/2007	500-4270	11	J		39	U		39	U		15	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-AST-TF1(3)	5/21/2007	500-4317	42	U		42	U		42	U		42	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-AST-TF2(4)	5/21/2007	500-4317	190	J		400	U		400	U		210	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-AST-TP1(0.5)	5/21/2007	500-4317	34	U		34	U		34	U		34	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-AST-TP2(0.5)	5/21/2007	500-4317	170	U		170	U		170	U		170	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-AST-TP3(0.5)	5/21/2007	500-4317	140	U		140	U		140	U		86	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-PF5(4)	5/29/2007	500-4427	20	J		41	U		41	U		41	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-PF6(4)	5/29/2007	500-4427	34	U		34	U		34	U		34	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-TP4(1)	5/31/2007	500-4472	350	U		350	U		350	U		160	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-TP5(1)	5/31/2007	500-4472	150	J		340	U		340	U		450			NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-TP6(1)	5/31/2007	500-4472	22	J		36	U		36	U		22	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-TF3(5)	5/31/2007	500-4472	23	J		37	U		37	U		33	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL2-TF4(7)	5/31/2007	500-4472	38	U		38	U		38	U		16	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL3-GENFILL	7/30/2007	500-5635	34	U		34	U		34	U		14	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL3-Topsoil	7/30/2007	500-5635	30	J		22	J		39	U		32	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JP-Borrowsource Clay 1	10/9/2007	500-7048	39	U		39	U		39	U		39	U		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL7-Fill Borrow Source	10/17/2007	500-7227	36	U		36	U		36	U		20	J		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS					
JPL5-A1(1)	1/2/2007	250108	NS			NS			NS			370	U		3300		230000		360000		84000		5300		820		120	J										
JPL5-A2(1)	1/2/2007	250108	NS			NS			NS			360	U		1300		47000		79000		22000		1800		350	J		360	U									
JPL5-A3(1)	1/2/2007	250108	NS			NS			NS			360	U		1700		52000		81000		20000		1600		310	J		360	U									
JPL5-A(41)	1/2/2007	250108	NS			NS			NS			390	U		1400		84000		160000		41000		3000		540		390	U										
JPL5-A5(1)	1/2/2007	250108	NS			NS			NS			380	U		1200		47000		87000		26000		2200		310	J		380	U									
JPL5-B1(1)	1/2/2007	250108	NS			NS			NS			380	U		6800		430000		620000		260000		13000		1900		300	J										
JPL5-B2(1)	1/2/2007	250108	NS			NS			NS			390	U		3000		170000		320000		81000		5500		1000		150	J										
JPL5-B3(1)	1/2/2007	250108	NS			NS			NS			390	U		3600		170000		300000		78000		5300		870		110	J										
JPL5-B4(1)	1/2/2007	250108	NS			NS			NS			380	U		710		47000		86000		22000		1800		370	J		380	U									

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

NS - not sampled

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 19 of 22)

Sample Identification	Date Sampled	SDG	Naphthalene			Acenaphthylene			Acenaphthene			Fluorene			Phenanthrene			Anthracene			Fluoranthene			Pyrene			Benzo(a)anthracene			Chrysene			Benzo(b)fluoranthene			Benzo(k)fluoranthene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPL5-B5(1)	1/2/2007	250108	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-1(3)	7/13/2007	500-5265	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-2(3)	7/13/2007	500-5265	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-3(3)	7/13/2007	500-5265	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-4(3)	7/13/2007	500-5265	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-5(3)	7/13/2007	500-5265	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-6(3)	7/13/2007	500-5265	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-7(3)	7/13/2007	500-5265	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-8(3)	7/13/2007	500-5265	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-9(3)	7/13/2007	500-5265	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-10(3)	7/13/2007	500-5265	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-11(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-12(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-13(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-14(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-15(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-16(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-17(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-18(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-19(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-20(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-21(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-22(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-23(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-24(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN-25(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-1(5)	8/10/2007	500-5933	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-2(5)	8/10/2007	500-5933	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-3(5)	8/10/2007	500-5933	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-4(5)	8/10/2007	500-5933	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-5(5)	8/10/2007	500-5933	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-6(5)	8/10/2007	500-5933	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-7(5)	8/10/2007	500-5933	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-8(5)	8/10/2007	500-5933	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-9(5)	8/10/2007	500-5933	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-10(5)	8/10/2007	500-5933	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-11(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-12(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-13(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-14(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-15(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-16(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-17(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-18(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-19(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-20(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-21(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

NS - not sampled

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 20 of 22)

Sample Identification	Date Sampled	SDG	Benzo(a)pyrene			Indeno(1,2,3-cd)pyrene			Dibenzo(a,h)anthracene			Benzo(ghi)perylene			Monochloronaphthalene			Dichloronaphthalene			Trichloronaphthalene			Tetrachloronaphthalene			Pentachloronaphthalene			Hexachloronaphthalene			Heptachloronaphthalene			Octachloronaphthalene				
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF					
JPL5-B5(1)	1/2/2007	250108	NS			NS			NS			NS			390	U		1000			57000			100000			28000			2100			410			380	U			
JPL5-PCN-1(3)	7/13/2007	500-5265	NS			NS			NS			NS			35	U		560			19000			26000			8800			990			200	J		71				
JPL5-PCN-2(3)	7/13/2007	500-5265	NS			NS			NS			NS			36	U		110			3300			5200			1800			150			36	U	J	36	U			
JPL5-PCN-3(3)	7/13/2007	500-5265	NS			NS			NS			NS			34	U		87			4000			7600			2500			190			39	J		34	U			
JPL5-PCN-4(3)	7/13/2007	500-5265	NS			NS			NS			NS			35	U		43			2100			4200			1600			150			25	J		35	U			
JPL5-PCN-5(3)	7/13/2007	500-5265	NS			NS			NS			NS			33	U		83			4800			7100			1900			99			33	U	J	33	U			
JPL5-PCN-6(3)	7/13/2007	500-5265	NS			NS			NS			NS			34	U		80			1800			2300			650			71			34	U	J	34	U			
JPL5-PCN-7(3)	7/13/2007	500-5265	NS			NS			NS			NS			34	U		40			1300			2100			640			77			8.8	J		34	U			
JPL5-PCN-8(3)	7/13/2007	500-5265	NS			NS			NS			NS			35	U		250			5900			7500			2500			230			34	J		6.7	J			
JPL5-PCN-9(3)	7/13/2007	500-5265	NS			NS			NS			NS			33	U		410			25000			42000			15000			1100			130	J		15	J			
JPL5-PCN-10(3)	7/13/2007	500-5265	NS			NS			NS			NS			33	U		2200			78000			110000			35000			2600			330	J		57				
JPL5-PCN-11(3)	7/16/2007	500-5285	NS			NS			NS			NS			34	U		200			6300			8200			2800			160			30	J		34	U			
JPL5-PCN-12(3)	7/16/2007	500-5285	NS			NS			NS			NS			34	U		72			2800			5400			2100			170			39	J		34	U			
JPL5-PCN-13(3)	7/16/2007	500-5285	NS			NS			NS			NS			34	U		1400			43000			62000			18000			1400			240			31	J			
JPL5-PCN-14(3)	7/16/2007	500-5285	NS			NS			NS			NS			35	U		1500			54000			75000			21000			1600			240			26	J			
JPL5-PCN-15(3)	7/16/2007	500-5285	NS			NS			NS			NS			35	U		95			4200			6900			2100			160			37			35	U			
JPL5-PCN-16(3)	7/16/2007	500-5285	NS			NS			NS			NS			35	U		9.5	J		190			260			100			35	U			35	U		35	U		
JPL5-PCN-17(3)	7/16/2007	500-5285	NS			NS			NS			NS			34	U		27	J		510			660			220			29	J			7.4	J		34	U		
JPL5-PCN-18(3)	7/16/2007	500-5285	NS			NS			NS			NS			34	U		8.6	J		170			190			62			34	U			34	U		34	U		
JPL5-PCN-19(3)	7/16/2007	500-5285	NS			NS			NS			NS			35	U		38			1100			1800			460			43			8.7	J		35	U			
JPL5-PCN-20(3)	7/16/2007	500-5285	NS			NS			NS			NS			45	U		210			12000			20000			5600			420			74			45	U			
JPL5-PCN-21(3)	7/16/2007	500-5285	NS			NS			NS			NS			36	U		31	J		630			950			210			23	J			36	U		36	U		
JPL5-PCN-22(3)	7/16/2007	500-5285	NS			NS			NS			NS			36	U		26	J		450			530			170			17	J			36	U		36	U		
JPL5-PCN-23(3)	7/16/2007	500-5285	NS			NS			NS			NS			34	U		36			830			900			200			20	J			34	U		34	U		
JPL5-PCN-24(3)	7/16/2007	500-5285	NS			NS			NS			NS			36	U		110			6100			10000			3100			190			36			36	U		36	U
JPL5-PCN-25(3)	7/16/2007	500-5285	NS			NS			NS			NS			33	U		62			1800			2900			1000			92			22	J		33	U			
JPL5-PCN2-1(5)	8/10/2007	500-5933	NS			NS			NS			NS			45	U		45	U		45	U		45	U		45	U		45	U			45	U		45	U		
JPL5-PCN2-2(5)	8/10/2007	500-5933	NS			NS			NS			NS			43	U		43	U		43	U		43	U		43	U		43	U			43	U		43	U		
JPL5-PCN2-3(5)	8/10/2007	500-5933	NS			NS			NS			NS			42	U		42	U		42	U		42	U		42	U		42	U			42	U		42	U		
JPL5-PCN2-4(5)	8/10/2007	500-5933	NS			NS			NS			NS			43	U		43	U		43	U		43	U		43	U		43	U			43	U		43	U		
JPL5-PCN2-5(5)	8/10/2007	500-5933	NS			NS			NS			NS			46	U		46	U		46	U		46	U		46	U		46	U			46	U		46	U		
JPL5-PCN2-6(5)	8/10/2007	500-5933	NS			NS			NS			NS			44	U		44	U		44	U		44	U		44	U		44	U			44	U		44	U		
JPL5-PCN2-7(5)	8/10/2007	500-5933	NS			NS			NS			NS			43	U		43	U		43	U		43	U		43	U		43	U			43	U		43	U		
JPL5-PCN2-8(5)	8/10/2007	500-5933	NS			NS			NS			NS			46	U		46	U		46	U		46	U		46	U		46	U			46	U		46	U		
JPL5-PCN2-9(5)	8/10/2007	500-5933	NS			NS			NS			NS			45	U		45	U		45	U		45	U		45	U		45	U			45	U		45	U		
JPL5-PCN2-10(5)	8/10/2007	500-5933	NS			NS			NS			NS			46	U		46	U		46	U		46	U		46	U		46	U			46	U		46	U		
JPL5-PCN2-11(5)	8/13/2007	500-5954	NS			NS			NS			NS			36	U		36	U		36	U		36	U		36	U		36	U			36	U		36	U		
JPL5-PCN2-12(5)	8/13/2007	500-5954	NS			NS			NS			NS			35	U		35	U		35	U		35	U		35	U		35	U			35	U		35	U		
JPL5-PCN2-13(5)	8/13/2007	500-5954	NS			NS			NS			NS			36	U		36	U		36	U		36	U		36	U		36	U			36	U		36	U		
JPL5-PCN2-14(5)	8/13/2007	500-5954	NS			NS			NS			NS			36	U		36	U		36	U		36	U		36	U		36	U			36	U		36	U		
JPL5-PCN2-15(5)	8/13/2007	500-5954	NS			NS			NS			NS			35	U		35	U		35	U		35	U		35	U		35	U			35	U		35	U		
JPL5-PCN2-16(5)	8/13/2007	500-5954	NS			NS			NS			NS			36	U		36	U		36	U		36	U		36	U		36	U			36	U		36	U		
JPL5-PCN2-17(5)	8/13/2007	500-5954	NS			NS			NS			NS			35	U		35	U		35	U		35	U		35	U		35	U			35	U		35	U		
JPL5-PCN2-18(5)	8/13/2007	500-5954	NS			NS			NS			NS			35	U		35	U		35	U		35	U		35	U		35	U			35	U		35	U		
JPL5-PCN2-19(5)	8/13/2007	500-5954	NS			NS			NS			NS			36	U		36	U		36	U		36	U		36	U		36	U			36	U		36	U		
JPL5-PCN2-20(5)	8/13/2007	500-5954	NS			NS			NS			NS			36	U		36	U		36	U		36	U		36	U		36	U			36	U		36	U		
JPL5-PCN2-21(5)	8/13/2007	500-5954	NS			NS			NS			NS			37	U		37	U		37	U		37	U		37	U		37	U			37	U		37	U		

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

NS - not sampled

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample Identification	Date Sampled	SDG	Naphthalene			Acenaphthylene			Acenaphthene			Fluorene			Phenanthrene			Anthracene			Fluoranthene			Pyrene			Benzo(a)anthracene			Chrysene			Benzo(b)fluoranthene			Benzo(k)fluoranthene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPL5-PCN2-22(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-23(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-24(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-25(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-26(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-PCN2-27(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AP1(0.5)	10/1/2008	500-14347	35	U		35	U		35	U		35	U		7.5	J		35	U		23	J		25	J		29	J		36			44			24	J	
JPL5-RS-AP2(0.5)	10/1/2008	500-14347	37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		11	J		17	J		37	U		37	U	
JPL5-RS-AP3(0.5)	10/1/2008	500-14347	36	U		36	U		36	U		36	U		36	U		36	U		18	J		36	U		36	U		36	U		36	U		36	U	
JPL5-RS-AP4(0.5)	10/1/2008	500-14347	37	U		37	U		37	U		37	U		37	U		37	U		19	J		37	U		33	J		42			46			56		
JPL5-RS-AP5(0.5)	10/1/2008	500-14347	35	U		35	U		35	U		35	U		8.8	J		35	U		35	U		35	U		35	U		35	U		35	U		35	U	
JPL5-RS-AP6(0.5)	10/1/2008	500-14347	39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U	
JPL5-RS-AP7(0.5)	10/1/2008	500-14347	35	U		35	U		35	U		35	U		13	J		35	U		35	U		35	U		35	U		35	U		35	U		35	U	
JPL5-RS-AP8(0.5)	10/1/2008	500-14347	38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U		38	U	
JPL5-RS-AP9(0.5)	10/1/2008	500-14347	41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U		41	U	
JPL5-RS-AP10(0.5)	10/1/2008	500-14347	40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U	
JPL5-RS-AP11(0.5)	10/1/2008	500-14347	35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U		35	U	
JPL5-RS-AP12(0.5)	10/1/2008	500-14347	34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U		34	U	
JPL5-RS-AF1(6)	10/1/2008	500-14347	40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U	
JPL5-RS-AF2(6)	10/1/2008	500-14347	39	U		39	U		39	U		39	U		9.7	J		39	U		21	J		39	U		39	U		39	U		39	U		39	U	
JPL5-RS-AF3(6)	10/1/2008	500-14347	39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U	
JPL5-RS-AF4(6)	10/1/2008	500-14347	43	U		43	U		43	U		43	U		14	J		43	U		30	J		29	J		43	U		43	U		43	U		43	U	
JPL5-RS-AF5(6)	10/1/2008	500-14347	40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U		40	U	
JPL5-RS-AF6(6)	10/1/2008	500-14347	37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U		37	U	
JPL5-RS-AF7(6)	10/1/2008	500-14347	42	U		42	U		42	U		42	U		9.1	J		42	U		27	J		21	J		42	U		42	U		42	U		42	U	
JPL5-RS-AF8(6)	10/1/2008	500-14347	39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U		39	U	
JPL5-RS-AF9(6)	10/1/2008	500-14347	37	U		37	U		37	U		37	U		37	U		37	U		21	J		24	J		37	U		37	U		37	U		37	U	

LF - lab flag
J - estimated concentration
ug/kg - micrograms per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-3

Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 22 of 22)

Sample Identification	Date Sampled	SDG	Benzo(a)pyrene			Indeno(1,2,3-cd)pyrene			Dibenzo(a,h)anthracene			Benzo(ghi)perylene			Monochloronaphthalene			Dichloronaphthalene			Trichloronaphthalene			Tetrachloronaphthalene			Pentachloronaphthalene			Hexachloronaphthalene			Heptachloronaphthalene			Octachloronaphthalene		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPL5-PCN2-22(5)	8/13/2007	500-5954	NS			NS			NS			NS			36 U			36 U			36 U			36 U			36 U			36 U			36 U					
JPL5-PCN2-23(5)	8/13/2007	500-5954	NS			NS			NS			NS			38 U			38 U			38 U			38 U			38 U			38 U			38 U					
JPL5-PCN2-24(5)	8/13/2007	500-5954	NS			NS			NS			NS			36 U			36 U			130			120			39			36 U			36 U					
JPL5-PCN2-25(5)	8/13/2007	500-5954	NS			NS			NS			NS			36 U			36 U			36 U			36 U			36 U			36 U			36 U					
JPL5-PCN2-26(5)	8/13/2007	500-5954	NS			NS			NS			NS			36 U			18 J			250			220			62			36 U			36 U					
JPL5-PCN2-27(5)	8/13/2007	500-5954	NS			NS			NS			NS			36 U			36 U			36 U			36 U			36 U			36 U			36 U					
JPL5-RS-AP1(0.5)	10/1/2008	500-14347	35 U			35 U			35 U			35 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AP2(0.5)	10/1/2008	500-14347	37 U			37 U			37 U			37 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AP3(0.5)	10/1/2008	500-14347	36 U			36 U			36 U			36 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AP4(0.5)	10/1/2008	500-14347	43			37 U			37 U			37 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AP5(0.5)	10/1/2008	500-14347	35 U			35 U			35 U			35 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AP6(0.5)	10/1/2008	500-14347	39 U			39 U			39 U			39 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AP7(0.5)	10/1/2008	500-14347	35 U			35 U			35 U			35 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AP8(0.5)	10/1/2008	500-14347	38 U			38 U			38 U			38 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AP9(0.5)	10/1/2008	500-14347	41 U			41 U			41 U			41 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AP10(0.5)	10/1/2008	500-14347	40 U			40 U			40 U			40 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AP11(0.5)	10/1/2008	500-14347	35 U			35 U			35 U			35 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AP12(0.5)	10/1/2008	500-14347	34 U			34 U			34 U			34 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AF1(6)	10/1/2008	500-14347	40 U			40 U			40 U			40 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AF2(6)	10/1/2008	500-14347	39 U			39 U			39 U			39 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AF3(6)	10/1/2008	500-14347	39 U			39 U			39 U			39 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AF4(6)	10/1/2008	500-14347	43 U			43 U			43 U			43 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AF5(6)	10/1/2008	500-14347	40 U			40 U			40 U			40 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AF6(6)	10/1/2008	500-14347	37 U			37 U			37 U			37 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AF7(6)	10/1/2008	500-14347	42 U			42 U			42 U			42 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AF8(6)	10/1/2008	500-14347	39 U			39 U			39 U			39 U			NS			NS			NS			NS			NS			NS			NS					
JPL5-RS-AF9(6)	10/1/2008	500-14347	37 U			37 U			37 U			37 U			NS			NS			NS			NS			NS			NS			NS					

LF - lab flag

J - estimated concentration

ug/kg - micrograms per kilogram

NS - not sampled

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-4

Polychlorinated Biphenyls (ug/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 1 of 3)

Sample Identification	Date Sampled	SDG	Aroclor 1016, 3541 Solid			Aroclor 1221, 3541 Solid			Aroclor 1232, 3541 Solid			Aroclor 1242, 3541 Solid			Aroclor 1248, 3541 Solid			Aroclor 1254, 3541 Solid			Aroclor 1260, 3541 Solid		
			Res	LF	VF																		
JPM12-AF4(2)	11/15/2006	249563	23	U																			
JPL5-A1(1)	1/2/2007	249966	38000	U																			
JPL5-A2(1)	1/2/2007	249966	18000	U																			
JPL5-A3(1)	1/2/2007	249966	38000	U																			
JPL5-A4(1)	1/2/2007	249966	19000	U																			
JPL5-A5(1)	1/2/2007	249966	10000	U																			
JPL5-B1(1)	1/2/2007	249966	19000	U																			
JPL5-B2(1)	1/2/2007	249966	39000	U																			
JPL5-B3(1)	1/2/2007	249966	38000	U																			
JPL5-B4(1)	1/2/2007	249966	20000	U																			
JPL5-B5(1)	1/2/2007	249966	9800	U																			
JPL5-C1(1)	1/3/2007	249972	2000	U																			
JPL5-C2(1)	1/3/2007	249972	9800	U																			
JPL5-C3(1)	1/3/2007	249972	9700	U																			
JPL5-C4(1)	1/3/2007	249972	410	U																			
JPL5-C5(1)	1/3/2007	249972	1800	U																			
JPL5-D1(1)	1/3/2007	249972	37	U																			
JPL5-D2(1)	1/3/2007	249972	20	U																			
JPL5-D3(1)	1/3/2007	249972	20	U																			
JPL5-D4(1)	1/3/2007	249972	92	U																			
JPL5-D5(1)	1/3/2007	249972	19	U																			
JPL5-E1(1)	1/4/2007	249981	45	U		45	U	270															
JPL5-E2(1)	1/4/2007	249981	43	U		43	U	200															
JPL5-E3(1)	1/4/2007	249981	43	U		43	U	160															
JPL5-E4(1)	1/4/2007	249981	210	U		210	U	200 J															
JPL5-E5(1)	1/4/2007	249981	2000	U		2000	U	2000 U															
JPL5-F1(1)	1/4/2007	249981	21	U		21	U	60															
JPL5-F2(1)	1/4/2007	249981	20	U		20	U	120															
JPL5-F3(1)	1/4/2007	249981	40	U		40	U	89															
JPL5-F4(1)	1/4/2007	249981	40	U		40	U	55															
JPL5-F5(1)	1/4/2007	249981	200	U		200	U	200 U															
JPL5-G1(1)	1/5/2007	249992	20	U		20	U	28															
JPL5-G2(1)	1/5/2007	249992	20	U		20	U	22															
JPL5-G3(1)	1/5/2007	249992	20	U		20	U	38															
JPL5-G4(1)	1/5/2007	249992	20	U		20	U	100															
JPL5-G5(1)	1/5/2007	249992	20	U		20	U	130															
JPL5-H1(1)	1/5/2007	249992	19	U		19	U	20															
JPL5-H2(1)	1/5/2007	249992	20	U		20	U	16 J															
JPL5-H3(1)	1/5/2007	249992	21	U		21	U	18 J															
JPL5-H4(1)	1/5/2007	249992	20	U		20	U	16 J															
JPL5-H5(1)	1/5/2007	249992	21	U		21	U	15 J															
JPL5-I1(1)	1/8/2007	250005	21	U		21	U	29															

LF - lab flag

ug/kg - micrograms per kilogram

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-4

Polychlorinated Biphenyls (ug/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 2 of 3)

Sample Identification	Date Sampled	SDG	Aroclor 1016, 3541 Solid			Aroclor 1221, 3541 Solid			Aroclor 1232, 3541 Solid			Aroclor 1242, 3541 Solid			Aroclor 1248, 3541 Solid			Aroclor 1254, 3541 Solid			Aroclor 1260, 3541 Solid		
			Res	LF	VF																		
JPL5-I2(1)	1/8/2007	250005	21	U		29																	
JPL5-I3(1)	1/8/2007	250005	20	U		29																	
JPL5-I4(1)	1/8/2007	250005	20	U		36																	
JPL5-I5(1)	1/8/2007	250005	21	U		40																	
JPL5-J1(1)	1/8/2007	250005	21	U		17	J																
JPL5-J2(1)	1/8/2007	250005	22	U		24		J															
JPL5-J3(1)	1/8/2007	250005	20	U		14	J																
JPL5-IJ41)	1/8/2007	250005	21	U		18	J																
JPL5-IJ51)	1/8/2007	250005	21	U		14	J																
JPL5-K1(1)	1/9/2007	250012	21	U		11	J																
JPL5-K2(1)	1/9/2007	250012	21	U		13	J																
JPL5-K3(1)	1/9/2007	250012	21	U		9.2	J																
JPL5-K4(1)	1/9/2007	250012	21	U		12	J																
JPL5-K5(1)	1/9/2007	250012	21	U		13	J																
JPL5-L1(1)	1/9/2007	250012	170	U		2000																	
JPL5-L2(1)	1/9/2007	250012	880	U		17000																	
JPL5-L3(1)	1/9/2007	250012	340	U		4500																	
JPL5-L4(1)	1/9/2007	250012	890	U		11000																	
JPL5-L5(1)	1/9/2007	250012	1000	U		9700																	
JPL5-AP1-(0.5)	6/18/2007	500-4792	17	U		21																	
JPL5-AP2-(0.5)	6/18/2007	500-4792	180	U		1500																	
JPL5-AP3-(0.5)	6/18/2007	500-4792	19	U		47																	
JPL5-AP4-(0.5)	6/18/2007	500-4792	17	U		8.4	J																
JPL5-AF1-(3)	6/18/2007	500-4792	40	U		390																	
JPL5-AF2-(3)	6/18/2007	500-4792	19	U																			
JPL5-AF3-(3)	6/18/2007	500-4792	19	U		7.9	J																
JPL5-AF4-(3)	6/18/2007	500-4792	19	U		62																	
JPL5-1(3)	6/22/2007	500-4954	19	U		14	J																
JPL5-2(3)	6/22/2007	500-4954	19	U		42																	
JPL5-3(3)	6/22/2007	500-4954	19	U		68																	
JPL5-4(3)	6/22/2007	500-4954	19	U		21																	
JPL5-5(3)	6/22/2007	500-4954	19	U		24																	
JPL5-6(3)	6/22/2007	500-4954	19	U		33																	
JPL5-7(3)	6/22/2007	500-4954	19	U		280																	
JPL5-8(3)	6/22/2007	500-4954	20	U		110																	
JPL5-9(3)	6/22/2007	500-4954	20	U		50																	
JPL5-10(3)	6/22/2007	500-4954	18	U		130																	
JPL5-11(3)	6/22/2007	500-4954	19	U		18	J																
JPL5-12(3)	6/22/2007	500-4954	19	U		19																	
JPL5-13(D)	6/22/2007	500-4954	330	U		3500																	
JPL5-10-D(3)	6/22/2007	500-4954	19	U		130																	
JPL5-PCN-1(3)	7/13/2007	500-5265	870	U																			

LF - lab flag

ug/kg - micrograms per kilogram

Res - result

SDG - sample delivery group

U - not detected

VF - validation flag

Table C-4

Polychlorinated Biphenyls (ug/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 3 of 3)

Sample Identification	Date Sampled	SDG	Aroclor 1016, 3541 Solid			Aroclor 1221, 3541 Solid			Aroclor 1232, 3541 Solid			Aroclor 1242, 3541 Solid			Aroclor 1248, 3541 Solid			Aroclor 1254, 3541 Solid			Aroclor 1260, 3541 Solid		
			Res	LF	VF																		
JPL5-PCN-2(3)	7/13/2007	500-5265	890	U																			
JPL5-PCN-3(3)	7/13/2007	500-5265	350	U																			
JPL5-PCN-4(3)	7/13/2007	500-5265	350	U																			
JPL5-PCN-5(3)	7/13/2007	500-5265	860	U																			
JPL5-PCN-6(3)	7/13/2007	500-5265	180	U																			
JPL5-PCN-7(3)	7/13/2007	500-5265	170	U																			
JPL5-PCN-8(3)	7/13/2007	500-5265	1900	U																			
JPL5-PCN-9(3)	7/13/2007	500-5265	1700	U																			
JPL5-PCN-10(3)	7/13/2007	500-5265	8400	U																			
JPL5-14(3)	7/17/2007	500-5306	19	U		50																	
JPL5-15(0)	7/17/2007	500-5306	92	U		500																	
JPL3-GENFILL	7/30/2007	500-5635	340	U																			
JPL3-Topsoil	7/30/2007	500-5635	390	U		290	J																
JPL5-PCN2-1(5)	8/10/2007	500-5933	22	U																			
JPL5-PCN2-2(5)	8/10/2007	500-5933	21	U																			
JPL5-PCN2-3(5)	8/10/2007	500-5933	21	U																			
JPL5-PCN2-4(5)	8/10/2007	500-5933	22	U																			
JPL5-PCN2-5(5)	8/10/2007	500-5933	23	U																			
JPL5-PCN2-6(5)	8/10/2007	500-5933	21	U																			
JPL5-PCN2-7(5)	8/10/2007	500-5933	23	U																			
JPL5-PCN2-8(5)	8/10/2007	500-5933	23	U																			
JPL5-PCN2-9(5)	8/10/2007	500-5933	23	U																			
JPL5-PCN2-10(5)	8/10/2007	500-5933	24	U																			
JPL3-CONCRE	9/21/2007	500-6713	1700	U																			
JP-Borrowsourc	10/9/2007	500-7048	19	U																			
JPL7-Fill Borrow	10/17/2007	500-7227	19	U																			

LF - lab flag
ug/kg - micrograms per kilogram
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-5

Total Petroleum Hydrocarbons - DRO and GRO - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 2)

Sample Identification	Date Sampled	SDG	TPH-DRO			TPH-GRO		
			Res	LF	VF	Res	LF	VF
JPL2-AST-TF1(3)	5/21/2007	500-4317	8.3			66	U	
JPL2-AST-TF2(4)	5/21/2007	500-4317	4900			180000		
JPL2-AST-TP1(0.5)	5/21/2007	500-4317	9.9			54	U	
JPL2-AST-TP2(0.5)	5/21/2007	500-4317	450			53	U	
JPL2-AST-TP3(0.5)	5/21/2007	500-4317	90			53	U	
JPL2-PF5(4)	5/29/2007	500-4427				100		
JPL2-PF6(4)	5/29/2007	500-4427				10000		
JPL2-TP4(1)	5/31/2007	500-4472	360			53	U	
JPL2-TP5(1)	5/31/2007	500-4472	62			51	U	
JPL2-TP6(1)	5/31/2007	500-4472	28			57	U	
JPL2-TF3(5)	5/31/2007	500-4472	16			57	U	
JPL2-TF4(7)	5/31/2007	500-4472	900			49000		
JPL5-AP34(0.5)	7/23/2007	500-5501				53	U	
JPL5-AP35(0.5)	7/23/2007	500-5501				59	U	
JPL5-AP36(0.5)	7/23/2007	500-5501				58	U	
JPL5-AF9(3)	7/23/2007	500-5501				54	U	
JPL5-AF10(3)	7/23/2007	500-5501				56	U	
JPL5-AF11(3)	7/23/2007	500-5501				52	U	
JPL5-AF12(3)	7/23/2007	500-5501				52	U	
JPL5-AF13(3)	7/23/2007	500-5501				54	U	
JPL5-AF14(3)	7/23/2007	500-5501				54	U	
JPL5-AF15(3)	7/23/2007	500-5501				54	U	
JPL5-AF16(3)	7/23/2007	500-5501				57	U	
JPL5-AF17(3)	7/23/2007	500-5501				56	U	
JPL5-AF18(3)	7/23/2007	500-5501				56	U	
JPL5-AF19(3)	7/23/2007	500-5501				53	U	
JPL5-AF20(3)	7/23/2007	500-5501				53	U	
JPL5-AF21(3)	7/23/2007	500-5501				51	U	
JPL5-AF20(3)-D	7/23/2007	500-5501				52	U	
JPL5-AF21(3)-D	7/23/2007	500-5501				52	U	
JPL3-GENFILL	7/30/2007	500-5635						
JPL3-Topsoil	7/30/2007	500-5635						
JPL5-SP1(1)	8/21/2007	500-6112	36					
JPL5-SP2(1)	8/21/2007	500-6112	44					
JPL5-SP3(1)	8/21/2007	500-6112	43					
JPL5-SP4(1)	8/21/2007	500-6112	28					
JPL5-SP5(1)	8/21/2007	500-6112	27					
JPL5-SP6(1)	8/21/2007	500-6112	13					

DRO - diesel range organics
 GRO - gasoline range organics
 LF - lab flag
 J - estimated concentration
 ug/kg - micrograms per kilogram
 SDG - sample delivery group
 Res - result
 U - not detected
 VF - validation flag

Table C-5

Total Petroleum Hydrocarbons - DRO and GRO - Soil (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 2)

Sample Identification	Date Sampled	SDG	TPH-DRO			TPH-GRO		
			Res	LF	VF	Res	LF	VF
JPL5-AP42(0.5)	9/4/2007	500-6332	35			59	U	
JPL5-AP43(0.5)	9/4/2007	500-6332	35			52	U	
JPL5-AP44(0.5)	9/4/2007	500-6332	94			60	U	
JPL5-AP45(0.5)	9/4/2007	500-6332	65			59	U	
JPL5-AP46(0.5)	9/4/2007	500-6332	30			65	U	
JPL5-AF28(2)	9/4/2007	500-6332	5.2			61	U	
JPL5-AF29(2)	9/4/2007	500-6332	320			62	U	
White Substance	9/18/2007	500-6620	4.7			50	U	
JPL3-CONCRETE	9/21/2007	500-6713						
JP-BorrowSource Clay 1	10/9/2007	500-7048						
JPL7-Fill Borrow Source	10/17/2007	500-7227						

DRO - diesel range organics
 GRO - gasoline range organics
 LF - lab flag
 J - estimated concentration
 ug/kg - micrograms per kilogram
 SDG - sample delivery group
 Res - result
 U - not detected
 VF - validation flag

TABLE C-6

Total Petroleum Hydrocarbons - GRO and DRO - Groundwater (ug/L)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 1)

Sample Identification	Date Sampled	SDG	TPH-DRO			TPH-GRO		
			Res	LF	VF	Res	LF	VF
JPM3-ITF-AF86(2)	8/8/2006	248084	140			56	U	
JPM3-ITF-AF87(2)	8/8/2006	248084	84			59	U	
JPLAP-S14-1	7/6/2005	238085						
JPLAP-S14-2	7/6/2005	238085						
JPLAP-S7-1	7/6/2005	238085						
JPLAP-S7-2	7/6/2005	238085						
JPM3-ITF-AF130(2)	8/21/2006	248307	17			59	U	
JPM3-ITF-AF133(2)	8/21/2006	248307	110			60	U	
JPM3-ITF-AF130(2)-D	8/21/2006	248307	25			60	U	
JPM3-ITF-AF153(2)	8/28/2006	248379	27			18	J	
JPM3-ITF-AF154(2)	8/28/2006	248379	36			8.8	J	
JPM3-ITF-AF153(2)-D	8/28/2006	248379	28			8.4	J	
JPM3-UNKNOWN MATERIAL	8/31/2006	248470	4800			4900		
JPL2-AF29(2)	2/9/2006	250224	27			81	U	
JPL2-AP37(0.5)	2/9/2006	250224	11			66	U	
JPL2-AP38(0.5)	2/9/2006	250224	21			87	U	
JPL2-CPTANK(0.5)	3/15/2007	250400	45000			82	U	
JPL2-Astliquid	5/23/2007	500-4362	830000			17000000		

Res - Results

LF - Lab Flag

VF - Valadation Flag

ug/L - micrograms per liter

SDG - sample delivery group

J - estimated concentration

U - not detected

VOCs - volatile organic compounds

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 1 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL9-B(3-5A)HG(0.5)	9/30/2006	240584	NS			NS			14000			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedW1	1/23/2006	243726	780			NS			NS			1100			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedW2	1/23/2006	243726	480			NS			NS			960			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedW3	1/23/2006	243726	2100			NS			NS			1400			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedW4	1/23/2006	243726	2100			NS			NS			1900			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedE1	1/23/2006	243726	630			NS			NS			1500			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedE2	1/23/2006	243726	970			NS			NS			1300			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedE3	1/23/2006	243726	4600			NS			NS			1800			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedE4	1/23/2006	243726	1400			NS			NS			1800			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP1(1)	3/15/2006	245078	270			NS			NS			250			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP2(1)	3/15/2006	245078	25			NS			NS			23			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP3(1)	3/15/2006	245078	10			NS			NS			29			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP4(7)	3/15/2006	245078	13			NS			NS			17			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP5(7)	3/15/2006	245078	11			NS			NS			52			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP6(7)	3/15/2006	245078	11			NS			NS			50			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP7(7)	3/15/2006	245078	15			NS			NS			59			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP8(1)	3/15/2006	245078	20			NS			NS			240			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF1(2)	3/15/2006	245078	19			NS			NS			80			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF2(3)	3/15/2006	245078	25			NS			NS			74			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF3(3)	3/15/2006	245078	17			NS			NS			52			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF4(10)	3/15/2006	245078	11			NS			NS			49			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF5(10)	3/15/2006	245078	10			NS			NS			49			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF6(3)	3/15/2006	245078	15			NS			NS			61			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP9(1)	3/17/2006	245162	18			NS			NS			190	J		NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP10(1)	3/17/2006	245162	12			NS			NS			39	J		NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP11(1)	3/17/2006	245162	18			NS			NS			51	J		NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF7(1)	3/17/2006	245162	6.6			NS			NS			21	J		NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF8(1)	3/17/2006	245162	13			NS			NS			52	J		NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF9(3)	3/17/2006	245162	12			NS			NS			58	J		NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF10(2)	3/17/2006	245162	43			NS			NS			80	J		NS			NS			NS			NS			NS			NS			NS		
JPM2-ASHPILLOW(1.5)	3/22/2006	245297	75			NS			NS			NS			NS			6			NS			47			0.28			10			NS		
JMP6-806-L10-Pb1	4/12/2006	245755	0.021			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-Ditch-L9-Pb2	4/12/2006	245755	0.03			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-Ditch-L8-Pb3	4/12/2006	245755	0.0089			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-806-L7-Pb4	4/12/2006	245755	0.0074			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-806-L3-Pb5	4/12/2006	245755	0.006			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-Ditch-L3-Pb6	4/12/2006	245755	0.012			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-806-L2-Pb7	4/12/2006	245755	0.023			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-806-L2-Pb8	4/12/2006	245755	0.019			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-OTF-AP19(1)	7/18/2006	247739	21			NS			NS			83			NS			NS			NS			NS			NS			NS			NS		
JPM3-OTF-AP19(1)D	7/18/2006	247739	20			NS			NS			82			NS			NS			NS			NS			NS			NS			NS		
JPM3-OTF-AP22(1)	7/18/2006	247739	56			NS			NS			97			NS			NS			NS			NS			NS			NS			NS		
JPM3-OTF-AP22(1)D	7/18/2006	247739	45			NS			NS			83			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP2(1)	7/18/2006	247739	340			NS			NS			660			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF4(2)	7/18/2006	247739	3600			NS			NS			250			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP8(1)	7/19/2006	247748	NS			NS			NS			260			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP9(1)	7/19/2006	247748	800			NS			NS			490			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF11(1)	7/19/2006	247748	560			NS			NS			680			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF11(3)	7/19/2006	247748	NS			NS			NS			79			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF12(2)	7/19/2006	247748	NS			NS			NS			58			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 2 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL9-B(3-5A)HG(0.5)	9/30/2006	240584	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedW1	1/23/2006	243726	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedW2	1/23/2006	243726	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedW3	1/23/2006	243726	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedW4	1/23/2006	243726	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedE1	1/23/2006	243726	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedE2	1/23/2006	243726	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedE3	1/23/2006	243726	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-35)SedE4	1/23/2006	243726	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP1(1)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP2(1)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP3(1)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP4(7)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP5(7)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP6(7)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP7(7)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP8(1)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF1(2)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF2(3)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF3(3)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF4(10)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF5(10)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF6(3)	3/15/2006	245078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP9(1)	3/17/2006	245162	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP10(1)	3/17/2006	245162	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AP11(1)	3/17/2006	245162	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF7(1)	3/17/2006	245162	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF8(1)	3/17/2006	245162	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF9(3)	3/17/2006	245162	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL1-B(61-4)AF10(2)	3/17/2006	245162	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-ASHPILLOW(1.5)	3/22/2006	245297	NS			1.1	U		0.53	U		NS			49000			13000			28000			1200	J		370			NS		
JMP6-806-L10-Pb1	4/12/2006	245755	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-Ditch-L9-Pb2	4/12/2006	245755	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-Ditch-L8-Pb3	4/12/2006	245755	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-806-L7-Pb4	4/12/2006	245755	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-806-L3-Pb5	4/12/2006	245755	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-Ditch-L3-Pb6	4/12/2006	245755	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-806-L2-Pb7	4/12/2006	245755	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JMP6-806-L2-Pb8	4/12/2006	245755	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-OTF-AP19(1)	7/18/2006	247739	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-OTF-AP19(1)D	7/18/2006	247739	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-OTF-AP22(1)	7/18/2006	247739	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-OTF-AP22(1)D	7/18/2006	247739	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP2(1)	7/18/2006	247739	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF4(2)	7/18/2006	247739	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP8(1)	7/19/2006	247748	51			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP9(1)	7/19/2006	247748	340			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF11(1)	7/19/2006	247748	140			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF11(3)	7/19/2006	247748	24			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF12(2)	7/19/2006	247748	27			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
LF - lab flag
J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 3 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM3-ITF-AF13(2)	7/19/2006	247748	NS			NS			NS			85			NS			7.1			NS			NS			NS			NS			NS		
JPM3-ITF-AF14(2)	7/19/2006	247748	NS			NS			NS			140			NS			9.3			NS			NS			NS			NS			NS		
JPM3-ITF-AF15(2)	7/19/2006	247748	NS			NS			NS			89			NS			7.5			NS			NS			NS			NS			NS		
JPM3-ITF-AF16(2)	7/19/2006	247748	NS			NS			NS			67			NS			12			NS			NS			NS			NS			NS		
JPM3-ITF-AF17(2)	7/19/2006	247748	NS			NS			NS			76			NS			9.7			NS			NS			NS			NS			NS		
JPM3-ITF-AF19(2)	7/19/2006	247748	NS			NS			NS			450			NS			9			NS			NS			NS			NS			NS		
JPM3-ITF-AF20(2)	7/19/2006	247748	NS			NS			NS			320			NS			14			NS			NS			NS			NS			NS		
JPM3-ITF-AF20(2)D	7/19/2006	247748	NS			NS			NS			350			NS			14			NS			NS			NS			NS			NS		
JPM3-ITF-AF21(2)	7/19/2006	247748	NS			NS			NS			680			NS			13			NS			NS			NS			NS			NS		
JPM3-ITF-AF22(3)	7/19/2006	247748	NS			NS			NS			290			NS			49			NS			NS			NS			NS			NS		
JPM3-ITF-AF23(2)	7/19/2006	247748	NS			NS			NS			140			NS			21			NS			NS			NS			NS			NS		
JPM3-ITF-AF24(2)	7/19/2006	247748	NS			NS			NS			100			NS			13			NS			NS			NS			NS			NS		
JPM3-ITF-AF25(2)	7/19/2006	247748	NS			NS			NS			98			NS			14			NS			NS			NS			NS			NS		
JPM3-ITF-AF24(2)D	7/19/2006	247748	NS			NS			NS			95			NS			13			NS			NS			NS			NS			NS		
JPM3-ITF-AP16(1)	7/25/2006	247836	510			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF46(2)	7/27/2006	247884	17			NS			NS			65			0.95	B		NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF47(2)	7/27/2006	247884	15			NS			NS			68			1.3	B		NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF48(2)	7/27/2006	247884	43			NS			NS			94			1.1	B		NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF49(2)	7/27/2006	247884	57			NS			NS			95			1.2	B		NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF51(2)	7/27/2006	247884	17			NS			NS			61			0.9	B		NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF52(2)	7/27/2006	247884	19			NS			NS			60			1.1	B		NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF53(2)	7/27/2006	247884	15			NS			NS			64			1.2	B		NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF54(2)	7/27/2006	247884	21			NS			NS			61			0.98	B		NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF55(2)	7/27/2006	247884	19			NS			NS			59			1.2	B		NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP75(2)	8/4/2006	248048	120			NS			NS			160			J			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF86(2)	8/8/2006	248084	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF87(2)	8/8/2006	248084	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF89(2)	8/8/2006	248084	270			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP46(1)	8/8/2006	248084	NS			NS			NS			160			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP47(1)	8/8/2006	248084	290			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF75(2)	8/4/2006	248135	NS			0.02	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF97(2)	8/11/2006	248160	NS			0.027	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF103(2)	8/14/2006	248182	NS			0.05	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF104(2)	8/14/2006	248182	NS			0.0072	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF89(2)	8/5/2006	248187	NS			0.062			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP47(1)	8/5/2006	248187	NS			0.026	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP51(1)	8/16/2006	248208	NS			0.06			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP54(1)	8/16/2006	248208	NS			0.059			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP56(1)	8/16/2006	248208	NS			0.02	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF116(2)	8/17/2006	248233	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF118(2)	8/17/2006	248233	NS			0.014	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF119(2)	8/17/2006	248233	NS			0.0067	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP57(1)	8/17/2006	248233	NS			0.016	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF119(2)-D	8/17/2006	248233	NS			0.021	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP60(1)	8/18/2006	248248	390			0.073			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP61(1)	8/18/2006	248248	NS			0.038	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP63(1)	8/18/2006	248248	NS			0.014	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF125(2)	8/21/2006	248271	NS			0.014	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF126(2)	8/21/2006	248271	NS			0.023	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF127(2)	8/21/2006	248271	NS			13			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 4 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM3-ITF-AF13(2)	7/19/2006	247748	26			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF14(2)	7/19/2006	247748	24			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF15(2)	7/19/2006	247748	26			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF16(2)	7/19/2006	247748	23			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF17(2)	7/19/2006	247748	24			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF19(2)	7/19/2006	247748	26			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF20(2)	7/19/2006	247748	30			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF20(2)D	7/19/2006	247748	37			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF21(2)	7/19/2006	247748	20			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF22(3)	7/19/2006	247748	61			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF23(2)	7/19/2006	247748	22			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF24(2)	7/19/2006	247748	28			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF25(2)	7/19/2006	247748	16			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF24(2)D	7/19/2006	247748	26			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF16(1)	7/25/2006	247836	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF46(2)	7/27/2006	247884	33			NS			0.59	U		NS			NS			NS			NS			NS			NS			1.2	U	
JPM3-ITF-AF47(2)	7/27/2006	247884	20			NS			0.14	B		NS			NS			NS			NS			NS			NS			1.2	U	
JPM3-ITF-AF48(2)	7/27/2006	247884	32			NS			0.35	B		NS			NS			NS			NS			NS			NS			1.2	U	
JPM3-ITF-AF49(2)	7/27/2006	247884	31			NS			0.31	B		NS			NS			NS			NS			NS			NS			1.1	U	
JPM3-ITF-AF51(2)	7/27/2006	247884	24			NS			0.59	U		NS			NS			NS			NS			NS			NS			1.2	U	
JPM3-ITF-AF52(2)	7/27/2006	247884	26			NS			0.19	B		NS			NS			NS			NS			NS			NS			1.1	U	
JPM3-ITF-AF53(2)	7/27/2006	247884	23			NS			0.19	B		NS			NS			NS			NS			NS			NS			1.1	U	
JPM3-ITF-AF54(2)	7/27/2006	247884	24			NS			0.64	U		NS			NS			NS			NS			NS			NS			1.3	U	
JPM3-ITF-AF55(2)	7/27/2006	247884	25			NS			0.26	B		NS			NS			NS			NS			NS			NS			1.2	U	
JPM3-ITF-AP75(2)	8/4/2006	248048	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF86(2)	8/8/2006	248084	21			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF87(2)	8/8/2006	248084	43			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF89(2)	8/8/2006	248084	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP46(1)	8/8/2006	248084	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP47(1)	8/8/2006	248084	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF75(2)	8/4/2006	248135	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF97(2)	8/11/2006	248160	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF103(2)	8/14/2006	248182	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF104(2)	8/14/2006	248182	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF89(2)	8/5/2006	248187	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP47(1)	8/5/2006	248187	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP51(1)	8/16/2006	248208	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP54(1)	8/16/2006	248208	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP56(1)	8/16/2006	248208	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF116(2)	8/17/2006	248233	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF118(2)	8/17/2006	248233	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF119(2)	8/17/2006	248233	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP57(1)	8/17/2006	248233	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF119(2)-D	8/17/2006	248233	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP60(1)	8/18/2006	248248	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP61(1)	8/18/2006	248248	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP63(1)	8/18/2006	248248	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF125(2)	8/21/2006	248271	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF126(2)	8/21/2006	248271	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF127(2)	8/21/2006	248271	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM3-ITF-AP68(1)	8/23/2006	248301	NS			0.21			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP70(1)	8/23/2006	248301	NS			0.024	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF140(2)	8/23/2006	248301	95			0.02	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP70(1)-D	8/23/2006	248301	NS			0.2			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF130(2)	8/21/2006	248307	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF133(2)	8/21/2006	248307	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF130(2)-D	8/21/2006	248307	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP2	7/17/2006	248312	NS			0.17			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP3	7/17/2006	248312	NS			0.014	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP4	7/17/2006	248312	NS			0.017	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP8(1)	7/19/2006	248312	NS			0.027	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF22(3)	7/19/2006	248312	NS			0.01	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP13(1)	7/24/2006	248312	NS			0.014	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF30(2)	7/24/2006	248312	NS			0.052			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF44(2)	7/25/2006	248312	NS			0.074			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF56(2)	7/28/2006	248312	NS			0.012	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP31(1)	7/28/2006	248312	NS			0.05	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP32(1)	8/1/2006	248312	NS			0.019	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP33(1)	8/1/2006	248312	NS			0.016	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF81(2)	8/7/2006	248312	NS			0.048	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF82(2)	8/7/2006	248312	NS			0.038	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP44(1)	8/7/2006	248312	NS			0.021	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF87(2)	8/8/2006	248312	NS			0.19			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF90(2)	8/8/2006	248312	NS			0.047	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP92(2)	8/8/2006	248312	NS			0.008	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF94(2)	8/8/2006	248312	NS			0.06			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP46(1)	8/8/2006	248312	NS			0.56			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF22(3)	7/19/2006	248315	NS			NS			NS			NS			NS			NS			NS		0.1	U	NS		NS			NS			NS		
JPM3-ITF-AF23(2)	7/19/2006	248315	NS			NS			NS			NS			NS			NS			NS		0.1	U	NS		NS			NS			NS		
JPM3-ITF-AF143(2)	8/24/2006	248327	NS			0.18			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF148(2)	8/24/2006	248327	NS			0.013	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP72(1)	8/24/2006	248327	NS			0.0052	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF149(2)	8/28/2006	248379	26			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF150(2)	8/28/2006	248379	19			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF151(2)	8/28/2006	248379	12			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF152(2)	8/28/2006	248379	39			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF153(2)	8/28/2006	248379	14			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF154(2)	8/28/2006	248379	19			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF155(2)	8/28/2006	248379	68			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP73(1)	8/28/2006	248379	100			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP74(1)	8/28/2006	248379	220			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF153(2)-D	8/28/2006	248379	15			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF160(2)	8/30/2006	248423	NS			0.15			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF162(2)	8/30/2006	248423	NS			1.2			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP73(1)	8/28/2006	248454	NS			0.016	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP74(1)	8/28/2006	248454	NS			0.021	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP76(1)	8/31/2006	248470	NS			0.0059	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP77(1)	9/7/2006	248537	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF171	9/29/2006	248926	170			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF173	9/29/2006	248926	NS			0.054			NS			NS			NS			NS			NS			NS			NS			NS			NS		

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J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM3-ITF-AP68(1)	8/23/2006	248301	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP70(1)	8/23/2006	248301	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF140(2)	8/23/2006	248301	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP70(1)-D	8/23/2006	248301	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF130(2)	8/21/2006	248307	16			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF133(2)	8/21/2006	248307	30			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF130(2)-D	8/21/2006	248307	16			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP2	7/17/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP3	7/17/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP4	7/17/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP8(1)	7/19/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF22(3)	7/19/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP13(1)	7/24/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF30(2)	7/24/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF44(2)	7/25/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF56(2)	7/28/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP31(1)	7/28/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP32(1)	8/1/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP33(1)	8/1/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF81(2)	8/7/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF82(2)	8/7/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP44(1)	8/7/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF87(2)	8/8/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF90(2)	8/8/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP92(2)	8/8/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF94(2)	8/8/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP46(1)	8/8/2006	248312	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF22(3)	7/19/2006	248315	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF23(2)	7/19/2006	248315	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF143(2)	8/24/2006	248327	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF148(2)	8/24/2006	248327	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP72(1)	8/24/2006	248327	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF149(2)	8/28/2006	248379	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF150(2)	8/28/2006	248379	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF151(2)	8/28/2006	248379	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF152(2)	8/28/2006	248379	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF153(2)	8/28/2006	248379	21			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF154(2)	8/28/2006	248379	20			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF155(2)	8/28/2006	248379	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP73(1)	8/28/2006	248379	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP74(1)	8/28/2006	248379	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF153(2)-D	8/28/2006	248379	22			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF160(2)	8/30/2006	248423	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF162(2)	8/30/2006	248423	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP73(1)	8/28/2006	248454	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP74(1)	8/28/2006	248454	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP76(1)	8/31/2006	248470	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP77(1)	9/7/2006	248537	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF171	9/29/2006	248926	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF173	9/29/2006	248926	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
LF - lab flag
J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 7 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM3-ITF-AF175	9/29/2006	248926	NS			0.1			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP80	9/29/2006	248926	NS			0.069			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP2	9/29/2006	248927	430			0.11			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP3	9/29/2006	248927	530			0.1			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP4	9/29/2006	248927	640			0.23			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP5	9/29/2006	248927	490			0.24			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP6	9/29/2006	248927	910			0.29			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP7	9/29/2006	248927	250			0.12			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP8	9/29/2006	248927	330			0.062			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP9	9/29/2006	248927	170			0.019	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP10	9/29/2006	248927	250			0.034	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP12	9/29/2006	248927	410			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP13	9/29/2006	248927	240			0.026	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP14	9/29/2006	248927	360			0.024	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF180(2)	10/3/2006	248981	36			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF181(2)	10/3/2006	248981	210			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF182(2)	10/3/2006	248981	25			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF183(2)	10/3/2006	248981	84			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF184(2)	10/3/2006	248981	20			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF185(2)	10/3/2006	248981	55			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF186(2)	10/3/2006	248981	14			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF187(2)	10/3/2006	248981	12			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF188(2)	10/3/2006	248981	22			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF189(2)	10/3/2006	248981	27			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF190(2)	10/3/2006	248981	21			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF191(2)	10/3/2006	248981	21			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP81(1)	10/3/2006	248981	40			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP82(1)	10/3/2006	248981	2100			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP83(1)	10/3/2006	248981	85			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF186(2)-D	10/3/2006	248981	19			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF193(2)	10/5/2006	249025	18			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF195(2)	10/5/2006	249025	NS			0.22			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF197(2)	10/5/2006	249025	16			NS			NS		51	0.97	B		NS			NS			NS		130			NS			NS			NS			
JPM3-ITF-AF200(2)	10/5/2006	249025	150			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF201(2)	10/5/2006	249025	140			0.051			NS			NS			NS		4.2			NS			NS			NS			NS			NS			
JPM3-ITF-AF195(2)-D	10/5/2006	249025	NS			0.15			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP1	10/6/2006	249049	35			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP2	10/6/2006	249049	30			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP3	10/6/2006	249049	30			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP4	10/6/2006	249049	33			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP5	10/6/2006	249049	31			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP6	10/6/2006	249049	29			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP7	10/6/2006	249049	140			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP8	10/6/2006	249049	62			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP9	10/6/2006	249049	36			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP10	10/6/2006	249049	30			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP11	10/6/2006	249049	53			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP12	10/6/2006	249049	230			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP13	10/6/2006	249049	53000			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP14	10/6/2006	249049	1200			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 8 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM3-ITF-AF175	9/29/2006	248926	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP80	9/29/2006	248926	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP2	9/29/2006	248927	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP3	9/29/2006	248927	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP4	9/29/2006	248927	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP5	9/29/2006	248927	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP6	9/29/2006	248927	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP7	9/29/2006	248927	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP8	9/29/2006	248927	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP9	9/29/2006	248927	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP10	9/29/2006	248927	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP12	9/29/2006	248927	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP13	9/29/2006	248927	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP14	9/29/2006	248927	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF180(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF181(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF182(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF183(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF184(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF185(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF186(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF187(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF188(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF189(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF190(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF191(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP81(1)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP82(1)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP83(1)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF186(2)-D	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF193(2)	10/5/2006	249025	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF195(2)	10/5/2006	249025	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF197(2)	10/5/2006	249025	23			NS			NS			NS			NS			NS			NS			NS			NS			NS		U
JPM3-ITF-AF200(2)	10/5/2006	249025	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF201(2)	10/5/2006	249025	32			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF195(2)-D	10/5/2006	249025	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP1	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP2	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP3	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP4	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP5	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP6	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP7	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP8	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP9	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP10	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP11	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP12	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP13	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP14	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 9 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM4-CP15	10/6/2006	249049	660			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP16	10/6/2006	249049	430			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP17	10/6/2006	249049	73			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP18	10/6/2006	249049	220			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP19	10/6/2006	249049	47			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP20	10/6/2006	249049	100			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP21	10/6/2006	249049	42			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP22	10/6/2006	249049	83			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP23	10/6/2006	249049	87			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP24	10/6/2006	249049	53			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP25	10/6/2006	249049	39			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP26	10/6/2006	249049	24			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP27	10/6/2006	249049	27			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP1	10/6/2006	249049	860			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP2	10/6/2006	249049	450			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP3	10/6/2006	249049	480			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP4	10/6/2006	249049	170			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP5	10/6/2006	249049	33			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP6	10/6/2006	249049	28			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF207(2)	10/9/2006	249072	NS			0.059			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF209(2)	10/9/2006	249072	NS			0.059			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP87(1)	10/9/2006	249072	NS			0.016	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP88(1)	10/9/2006	249072	NS			0.012	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP89(1)	10/9/2006	249072	NS			0.033	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP15	10/9/2006	249072	280			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP16	10/9/2006	249072	92			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP17	10/9/2006	249072	520			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF200(2)	10/5/2006	249106	NS			0.18			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP12	10/6/2006	249117	NS			0.084			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP7	10/6/2006	249117	NS			0.026	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP12	10/6/2006	249117	NS			0.043	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP13	10/6/2006	249117	NS			200			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP114	10/6/2006	249117	NS			0.39			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP115	10/6/2006	249117	NS			0.099			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP116	10/6/2006	249117	NS			0.056			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP118	10/6/2006	249117	NS			0.064			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP120	10/6/2006	249117	NS			0.015	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP1	10/6/2006	249117	NS			0.51			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP2	10/6/2006	249117	NS			0.79			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP3	10/6/2006	249117	NS			0.016	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP4	10/6/2006	249117	NS			0.037	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP15	10/9/2006	249117	NS			0.027	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP17	10/9/2006	249117	NS			0.51			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-16	10/13/2006	249144	1600			1.7			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-17	10/13/2006	249144	350			0.022	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-18	10/13/2006	249144	420			0.31			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-19	10/13/2006	249144	4500			26			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-20	10/13/2006	249144	60000			140			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-21	10/13/2006	249144	530			0.082			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-22	10/13/2006	249144	1200			0.42			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 10 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM4-CP15	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP16	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP17	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP18	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP19	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP20	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP21	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP22	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP23	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP24	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP25	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP26	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP27	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP1	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP2	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP3	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP4	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP5	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP6	10/6/2006	249049	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF207(2)	10/9/2006	249072	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF209(2)	10/9/2006	249072	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP87(1)	10/9/2006	249072	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP88(1)	10/9/2006	249072	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP89(1)	10/9/2006	249072	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP15	10/9/2006	249072	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP16	10/9/2006	249072	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP17	10/9/2006	249072	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF200(2)	10/5/2006	249106	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-DITCH-CP12	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP7	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP12	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP13	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP114	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP115	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP116	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP118	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP120	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP1	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP2	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP3	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP4	10/6/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP15	10/9/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP17	10/9/2006	249117	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-16	10/13/2006	249144	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-17	10/13/2006	249144	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-18	10/13/2006	249144	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-19	10/13/2006	249144	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-20	10/13/2006	249144	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-21	10/13/2006	249144	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-CP7-22	10/13/2006	249144	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

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 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
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 SDG - sample delivery group
 U - not detected
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Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 11 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM3-CP7-23	10/13/2006	249144	1400			2.6			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-1(1)	10/13/2006	249145	420			0.48			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-1(2)	10/13/2006	249145	21			0.009	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-1(3)	10/13/2006	249145	19			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-1(4)	10/13/2006	249145	260			0.62			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-2(1)	10/13/2006	249145	800			2.4			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-2(2)	10/13/2006	249145	420			0.37			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-2(3)	10/13/2006	249145	330			0.61			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-2(4)	10/13/2006	249145	120			210			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-3(1)	10/13/2006	249145	110			0.014	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-3(2)	10/13/2006	249145	18			0.017	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-3(3)	10/13/2006	249145	44			0.03	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-3(4)	10/13/2006	249145	580			0.58			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF213(2)	10/17/2006	249177	24			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF214(2)	10/17/2006	249177	17			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF215(2)	10/17/2006	249177	15			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF216(2)	10/17/2006	249177	11			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF217(2)	10/17/2006	249177	20			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF218(2)	10/17/2006	249177	21			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF219(2)	10/17/2006	249177	16			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF220(2)	10/17/2006	249177	40			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF221(2)	10/17/2006	249177	28			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP90(1)	10/17/2006	249177	300			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP91(1)	10/17/2006	249177	170			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF221(2)-D	10/17/2006	249177	19			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP4(1)	10/19/2006	249220	500			0.18			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP4(2)	10/19/2006	249220	350			0.013	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP4(3)	10/19/2006	249220	24			0.0091	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP5(1)	10/19/2006	249220	92			0.03	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP5(2)	10/19/2006	249220	29			0.014	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP5(3)	10/19/2006	249220	15			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP6(1)	10/19/2006	249220	56			0.0066	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP6(2)	10/19/2006	249220	20			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP6(3)	10/19/2006	249220	17			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP31(0.5)	10/19/2006	249221	27			0.084			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP32(0.5)	10/19/2006	249221	29			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP33(0.5)	10/19/2006	249221	27			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP90(1)	10/17/2006	249239	NS			0.086			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP91(1)	10/17/2006	249239	NS			0.043	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF222(2)	10/20/2006	249240	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF223(2)	10/20/2006	249240	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF224(2)	10/20/2006	249240	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF225(2)	10/20/2006	249240	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF226(2)	10/20/2006	249240	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF227(2)	10/20/2006	249240	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF228(2)	10/20/2006	249240	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF229(2)	10/20/2006	249240	NS			0.065			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF230(2)	10/20/2006	249240	NS			0.0067	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF231(2)	10/20/2006	249240	150			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF232(2)	10/20/2006	249240	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 12 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM3-CP7-23	10/13/2006	249144	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-1(1)	10/13/2006	249145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-1(2)	10/13/2006	249145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-1(3)	10/13/2006	249145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-1(4)	10/13/2006	249145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-2(1)	10/13/2006	249145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-2(2)	10/13/2006	249145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-2(3)	10/13/2006	249145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-2(4)	10/13/2006	249145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-3(1)	10/13/2006	249145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-3(2)	10/13/2006	249145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-3(3)	10/13/2006	249145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-LAGOON-3(4)	10/13/2006	249145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF213(2)	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF214(2)	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF215(2)	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF216(2)	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF217(2)	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF218(2)	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF219(2)	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF220(2)	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF221(2)	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP90(1)	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP91(1)	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF221(2)-D	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP4(1)	10/19/2006	249220	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP4(2)	10/19/2006	249220	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP4(3)	10/19/2006	249220	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP5(1)	10/19/2006	249220	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP5(2)	10/19/2006	249220	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP5(3)	10/19/2006	249220	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP6(1)	10/19/2006	249220	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP6(2)	10/19/2006	249220	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP6(3)	10/19/2006	249220	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP31(0.5)	10/19/2006	249221	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP32(0.5)	10/19/2006	249221	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-CP33(0.5)	10/19/2006	249221	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP90(1)	10/17/2006	249239	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP91(1)	10/17/2006	249239	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF222(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF223(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF224(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF225(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF226(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF227(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF228(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF229(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF230(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF231(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF232(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 13 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM3-ITF-AF233(2)	10/20/2006	249240	20			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF234(2)	10/20/2006	249240	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF171	10/20/2006	249276	NS			0.27			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-1(1)	11/1/2006	249398	500			0.33			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-2(1)	11/1/2006	249398	360			0.13			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-3(1)	11/1/2006	249398	380			1.4			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-4(1)	11/1/2006	249398	55			0.022	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-5(1)	11/1/2006	249398	47			0.021	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-6(1)	11/1/2006	249398	260			0.41			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-7(1)	11/1/2006	249398	1500			7.7			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-8(1)	11/1/2006	249398	2600			5.9			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3ITFCP1-9(1)	11/1/2006	249398	1700			4.1			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-10(1)	11/1/2006	249398	1200			20			NS			NS			67			NS			NS			0.77			NS			NS			NS		
JPM3-ITF-CP1-11(1)	11/1/2006	249398	4300			500			NS			NS			23			NS			NS			1.5			NS			NS			NS		
JPM3-ITF-CP1-12(1)	11/1/2006	249398	32000			210			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-13(1)	11/1/2006	249398	890			2.2			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-14(1)	11/1/2006	249398	2200			15			NS			NS			21			NS			NS			1.6			NS			NS			NS		
JPM3-ITF-CP1-15(1)	11/1/2006	249398	3200			8.6			NS			NS			27			NS			NS			2.2			NS			NS			NS		
JPM3-ITF-CP1-16(1)	11/1/2006	249398	6000			140			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-17(1)	11/1/2006	249398	940			1.8			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-18(1)	11/1/2006	249398	190			0.64			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-19(1)	11/1/2006	249398	42			0.035	B	B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-20(1)	11/1/2006	249398	820			0.068			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-21(1)	11/1/2006	249398	210			0.017	B	B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF235(2)	11/3/2006	249439	NS			0.0053	B	B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF236(2)	11/3/2006	249439	150			NS		B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF237(2)	11/3/2006	249439	NS			0.25			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF238(2)	11/3/2006	249439	NS			0.018	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF239(2)	11/3/2006	249439	NS			0.027	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF240(2)	11/3/2006	249439	NS			0.008	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF241(2)	11/3/2006	249439	NS			0.022	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF236(2)	11/3/2006	249477	NS			0.15			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF245(2)	11/8/2006	249487	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP92(2)	11/8/2006	249487	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP93(2)	11/8/2006	249487	NS			0.0087	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP-1-22(.5)	11/9/2006	249510	360			12			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP7(.5)	11/9/2006	249511	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP8(.5)	11/9/2006	249511	430			1.6			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP9(.5)	11/9/2006	249511	NS			0.011	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP11(.5)	11/9/2006	249511	NS			0.02	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP1(1)	11/14/2006	249544	1700			3.2			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP2(1)	11/14/2006	249544	18			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP3(1)	11/14/2006	249544	170			0.0053	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP4(1)	11/14/2006	249544	150			0.013	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP5(1)	11/14/2006	249544	5.8			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP6(1)	11/14/2006	249544	130			0.0074	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP7(1)	11/14/2006	249544	200			0.018	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP8(1)	11/14/2006	249544	180			0.0082	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP9(1)	11/14/2006	249544	12			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP21(1)	11/15/2006	249563	NS			0.38			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 14 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM3-ITF-AF233(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF234(2)	10/20/2006	249240	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF171	10/20/2006	249276	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-1(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-2(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-3(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-4(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-5(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-6(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-7(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-8(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3ITFCP1-9(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-10(1)	11/1/2006	249398	48			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-11(1)	11/1/2006	249398	110			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-12(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-13(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-14(1)	11/1/2006	249398	190			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-15(1)	11/1/2006	249398	290			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-16(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-17(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-18(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-19(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-20(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP1-21(1)	11/1/2006	249398	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF235(2)	11/3/2006	249439	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF236(2)	11/3/2006	249439	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF237(2)	11/3/2006	249439	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF238(2)	11/3/2006	249439	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF239(2)	11/3/2006	249439	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF240(2)	11/3/2006	249439	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF241(2)	11/3/2006	249439	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF236(2)	11/3/2006	249477	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF245(2)	11/8/2006	249487	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP92(2)	11/8/2006	249487	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP93(2)	11/8/2006	249487	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-CP-1-22(.5)	11/9/2006	249510	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP7(.5)	11/9/2006	249511	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP8(.5)	11/9/2006	249511	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP9(.5)	11/9/2006	249511	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-CP11(.5)	11/9/2006	249511	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP1(1)	11/14/2006	249544	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP2(1)	11/14/2006	249544	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP3(1)	11/14/2006	249544	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP4(1)	11/14/2006	249544	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP5(1)	11/14/2006	249544	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP6(1)	11/14/2006	249544	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP7(1)	11/14/2006	249544	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP8(1)	11/14/2006	249544	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP9(1)	11/14/2006	249544	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP21(1)	11/15/2006	249563	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

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Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 15 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM12-AP24(1)	11/15/2006	249563	NS			3.6			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP10(1)	11/15/2006	249563	20		J	0.02	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP11(1)	11/15/2006	249563	71			0.018	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP12(1)	11/15/2006	249563	150			0.012	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP13(1)	11/15/2006	249563	160			0.02	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF3(2)	11/15/2006	249563	15		J	0.011	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF4(2)	11/15/2006	249563	21		J	0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF5(2)	11/16/2006	249576	53		J	0.022	B	J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF6(2)	11/16/2006	249576	150			0.16	J	J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF7(2)	11/16/2006	249576	49		J	0.05	B	J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-ASH	11/17/2006	249602	13000		J	92			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP26(1)	11/17/2006	249603	NS			0.08			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP31(1)	11/20/2006	249616	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP34(1)	11/20/2006	249616	NS			0.025	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP35(1)	11/20/2006	249616	NS			0.053			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP42(1)	11/20/2006	249616	NS			0.021	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP43(1)	11/20/2006	249616	NS			0.006	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP44(1)	11/20/2006	249616	1900			4.7			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP45(1)	11/21/2006	249623	120			0.4		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP46(1)	11/21/2006	249623	1300			2.7		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP47(1)	11/21/2006	249623	46		J	0.04	B	B	J	NS		NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP48(1)	11/21/2006	249623	300			0.04	B	B	J	NS		NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP49(1)	11/21/2006	249623	44		J	0.0071	B	B	J	NS		NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP50(1)	11/21/2006	249623	49			0.05	U	JB, U	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP51(1)	11/21/2006	249623	35		J	0.05	U	JB, U	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP52(1)	11/21/2006	249623	38		J	0.05	U	JB, U	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP53(1)	11/21/2006	249623	28		J	0.05	U	JB, U	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP54(1)	11/21/2006	249623	41		J	0.05	U	JB, U	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP56(1)	11/22/2006	249634	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP58(1)	11/22/2006	249634	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP65(1)	11/27/2006	249645	NS			0.046	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP69(1)	11/29/2006	249674	60		J	0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP72(1)	11/29/2006	249674	130			0.041	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF10(2)	11/29/2006	249674	18		J	0.009	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF11(2)	11/29/2006	249674	18		J	0.005	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-AP76(1)	12/5/2006	249743	560			0.092			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-AP78(1)	12/5/2006	249743	NS			0.024	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-AP79(1)	12/5/2006	249743	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-AP81(1)	12/5/2006	249743	1700			1			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-AP82(1)	12/5/2006	249743	20			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-AP83(1)	12/5/2006	249743	35			0.0062	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-AF3(1)	12/6/2006	249754	NS			0.028	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-AF1(4)	12/6/2006	249754	840			0.72			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-AF2(4)	12/6/2006	249754	210			0.25			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-AF3(4)	12/6/2006	249754	230			0.5			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-LEAD A 21 DE L	12/7/2006	249776	0.043			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP4(1)	12/7/2006	249777	170			0.023	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP5(1)	12/7/2006	249777	20		J	0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP6(1)	12/7/2006	249777	900			0.23			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP7(1)	12/7/2006	249777	320			0.043	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM12-AP24(1)	11/15/2006	249563	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP10(1)	11/15/2006	249563	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP11(1)	11/15/2006	249563	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP12(1)	11/15/2006	249563	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP13(1)	11/15/2006	249563	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF3(2)	11/15/2006	249563	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF4(2)	11/15/2006	249563	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF5(2)	11/16/2006	249576	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF6(2)	11/16/2006	249576	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF7(2)	11/16/2006	249576	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-ASH	11/17/2006	249602	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP26(1)	11/17/2006	249603	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP31(1)	11/20/2006	249616	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP34(1)	11/20/2006	249616	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP35(1)	11/20/2006	249616	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP42(1)	11/20/2006	249616	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP43(1)	11/20/2006	249616	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP44(1)	11/20/2006	249616	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP45(1)	11/21/2006	249623	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP46(1)	11/21/2006	249623	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP47(1)	11/21/2006	249623	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP48(1)	11/21/2006	249623	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP49(1)	11/21/2006	249623	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP50(1)	11/21/2006	249623	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP51(1)	11/21/2006	249623	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP52(1)	11/21/2006	249623	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP53(1)	11/21/2006	249623	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP54(1)	11/21/2006	249623	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP56(1)	11/22/2006	249634	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP58(1)	11/22/2006	249634	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP65(1)	11/27/2006	249645	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP69(1)	11/29/2006	249674	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP72(1)	11/29/2006	249674	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF10(2)	11/29/2006	249674	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF11(2)	11/29/2006	249674	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-AP76(1)	12/5/2006	249743	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-AP78(1)	12/5/2006	249743	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-AP79(1)	12/5/2006	249743	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-AP81(1)	12/5/2006	249743	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-AP82(1)	12/5/2006	249743	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM2-AP83(1)	12/5/2006	249743	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-AF3(1)	12/6/2006	249754	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-AF1(4)	12/6/2006	249754	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-AF2(4)	12/6/2006	249754	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-AF3(4)	12/6/2006	249754	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-LEAD A 21 DE L	12/7/2006	249776	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP4(1)	12/7/2006	249777	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP5(1)	12/7/2006	249777	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP6(1)	12/7/2006	249777	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP7(1)	12/7/2006	249777	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM4-AP8(1)	12/7/2006	249777	360			0.04	B		NS			NS			NS			NS			NS			NS			NS			NS					
JPM4-AP9(1)	12/7/2006	249777	410			0.38			NS			NS			NS			NS			NS			NS			NS			NS					
JPM4-AP10(1)	12/7/2006	249777	33		J	0.1			NS			NS			NS			NS			NS			NS			NS			NS					
JPM4-AF4(2)	12/7/2006	249777	1200			2.8			NS			NS			NS			NS			NS			NS			NS			NS					
JPM4-AF5(2)	12/7/2006	249777	9300			110			NS			NS			NS			NS			NS			NS			NS			NS					
JPM4-AF6(2)	12/7/2006	249777	2300			150			NS			NS			NS			NS			NS			NS			NS			NS					
JPM4-AP1(1)	12/7/2006	249777	180000			310			NS			NS			NS			NS			NS			NS			NS			NS					
JPM12-AP84(1)	12/18/2006	249895	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS					
JPM12-AP85(1)	12/18/2006	249895	460			0.2			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AP98(1)	12/27/2006	249944	41		J	NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AP99(1)	12/27/2006	249944	45		J	NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF249(3)	12/27/2006	249944	51		J	NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF250(3)	12/27/2006	249944	220			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF251(3)	12/27/2006	249944	22		J	NS			NS			NS			0.2	B		NS			NS			22			NS			NS					
JPM3-ITF-AF252(3)	12/27/2006	249944	140			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF253(3)	12/27/2006	249944	170			NS			NS			NS			9			NS			NS			0.44			NS			NS					
JPM3-ITF-AF254(3)	12/27/2006	249944	190			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-STOCKPILE-TC	12/27/2006	249945				0.16			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-A1(1)	1/2/2007	249966	970			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-A2(1)	1/2/2007	249966	590			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-A3(1)	1/2/2007	249966	720			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-A4(1)	1/2/2007	249966	700			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-A5(1)	1/2/2007	249966	690			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-B1(1)	1/2/2007	249966	1200			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-B2(1)	1/2/2007	249966	930			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-B3(1)	1/2/2007	249966	840			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-B4(1)	1/2/2007	249966	710			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-B5(1)	1/2/2007	249966	420			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-C4(1)	1/3/2007	249972	NS			0.014	B		NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-D4(1)	1/3/2007	249972	400			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF250(3)	12/27/2006	249973	NS			0.53			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF252(3)	12/27/2006	249973	NS			0.087			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF253(3)	12/27/2006	249973	NS			0.15			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF254(3)	12/27/2006	249973	NS			0.093			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-E4(1)	1/4/2007	249981	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-E5(1)	1/4/2007	249981	NS			0.0079	B		NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-G1(1)	1/5/2007	249992	17			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-G2(1)	1/5/2007	249992	17			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-G3(1)	1/5/2007	249992	17			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-G4(1)	1/5/2007	249992	18			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-G5(1)	1/5/2007	249992	20			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-H1(1)	1/5/2007	249992	21			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-H2(1)	1/5/2007	249992	17			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-H3(1)	1/5/2007	249992	17			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-H4(1)	1/5/2007	249992	19			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-H5(1)	1/5/2007	249992	16			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-B5(1)	1/2/2007	250003	NS			0.14			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-D4(1)	1/2/2007	250003	NS			0.038	B		NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-L2(1)	1/9/2007	250012	0.063			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPL5-L4(1)	1/9/2007	250012	0.27			NS			NS			NS			NS			NS			NS			NS			NS			NS					

B - blank contamination
LF - lab flag
J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 18 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM4-AP8(1)	12/7/2006	249777	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP9(1)	12/7/2006	249777	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP10(1)	12/7/2006	249777	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AF4(2)	12/7/2006	249777	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AF5(2)	12/7/2006	249777	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AF6(2)	12/7/2006	249777	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP1(1)	12/7/2006	249777	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP84(1)	12/18/2006	249895	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP85(1)	12/18/2006	249895	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP98(1)	12/27/2006	249944	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP99(1)	12/27/2006	249944	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF249(3)	12/27/2006	249944	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF250(3)	12/27/2006	249944	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF251(3)	12/27/2006	249944	16			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF252(3)	12/27/2006	249944	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF253(3)	12/27/2006	249944	57			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF254(3)	12/27/2006	249944	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-STOCKPILE-TC	12/27/2006	249945	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-A1(1)	1/2/2007	249966	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-A2(1)	1/2/2007	249966	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-A3(1)	1/2/2007	249966	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-A4(1)	1/2/2007	249966	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-A5(1)	1/2/2007	249966	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-B1(1)	1/2/2007	249966	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-B2(1)	1/2/2007	249966	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-B3(1)	1/2/2007	249966	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-B4(1)	1/2/2007	249966	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-B5(1)	1/2/2007	249966	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-C4(1)	1/3/2007	249972	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-D4(1)	1/3/2007	249972	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF250(3)	12/27/2006	249973	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF252(3)	12/27/2006	249973	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF253(3)	12/27/2006	249973	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF254(3)	12/27/2006	249973	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-E4(1)	1/4/2007	249981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-E5(1)	1/4/2007	249981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-G1(1)	1/5/2007	249992	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-G2(1)	1/5/2007	249992	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-G3(1)	1/5/2007	249992	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-G4(1)	1/5/2007	249992	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-G5(1)	1/5/2007	249992	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-H1(1)	1/5/2007	249992	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-H2(1)	1/5/2007	249992	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-H3(1)	1/5/2007	249992	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-H4(1)	1/5/2007	249992	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-H5(1)	1/5/2007	249992	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-B5(1)	1/2/2007	250003	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-D4(1)	1/2/2007	250003	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-L2(1)	1/9/2007	250012	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-L4(1)	1/9/2007	250012	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 19 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL5-L5(1)	1/9/2007	250012	0.25			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-HUMP2(1)	1/10/2007	250023	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-HUMP8(1)	1/10/2007	250023	NS			0.011	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-HUMP9(1)	1/10/2007	250023	NS			0.026	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP1(1)	1/12/2007	250051	110		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP2(1)	1/12/2007	250051	120		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP3(1)	1/12/2007	250051	180		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP4(1)	1/12/2007	250051	87		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP5(1)	1/12/2007	250051	140		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP6(1)	1/12/2007	250051	40		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP7(1)	1/12/2007	250051	24		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP8(1)	1/12/2007	250051	73		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP9(1)	1/12/2007	250051	54		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITFAF250(3)	12/27/2006	250056	NS			0.32			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITFAF252(3)	12/27/2006	250056	NS			0.41			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITFAF253(3)	12/27/2006	250056	NS			0.093			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITFAF254(3)	12/27/2006	250056	NS			0.11			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP1(1)	1/12/2007	250104	NS			0.0074	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP2(1)	1/12/2007	250104	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP5(1)	1/12/2007	250104	NS			0.005	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP19(1)	1/12/2007	250104	NS			0.067			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF12(2)	1/30/2007	250164	16			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP86(1)	1/30/2007	250164	110			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP87(1)	1/30/2007	250164	9.7			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP88(1)	1/30/2007	250164	18			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP255(2)	1/30/2007	250165	17			NS			NS			66			0.49	B	J	NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP256(2)	1/30/2007	250165	19			NS			NS			63			0.97	B	J	NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP257(2)	1/30/2007	250165	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP258(2)	1/30/2007	250165	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP259(2)	2/1/2007	250183	11			0.5	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP260(2)	2/1/2007	250183	25			0.58	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP103(1)	1/30/2007	250192	NS			1.8			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF378(1)	2/9/2007	250224	NS			NS			NS			63			NS			8.5			NS			NS			NS			NS			NS		
JPM3-ITF-AF97B(1)	2/9/2007	250224	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF49B(1)	2/9/2007	250224	37			NS			NS			70			0.68	B		NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF208B(1)	2/9/2007	250224	NS			NS			NS			NS			NS			7.4			NS			NS			NS			NS			NS		
JPM3-ITF-AF209B(1)	2/9/2007	250224	NS			NS			NS			NS			NS			10			NS			NS			NS			NS			NS		
JPM3-ITF-AF205B(1)	2/9/2007	250224	NS			NS			NS			77			0.95	B		NS			NS			NS			110			NS			NS		
JPM3-ITF-AF215B(1)	2/9/2007	250224	NS			NS			NS			94			0.9	B		NS			NS			NS			180			NS			NS		
JPL2-AP53(1)	2/22/2007	250263	14			NS			NS			70			NS			6.4			NS			NS			NS			0.54			NS		
JPL2-AP54(1)	2/22/2007	250263	77			NS			NS			430			NS			7.7			NS			NS			6.8			NS			NS		
JPL2-AP55(1)	2/22/2007	250263	130			0.027	B		NS			680			NS			7.7			NS			NS			34			NS			NS		
JPL2-AF34(2)	2/22/2007	250263	24			NS			NS			NS			NS			16			NS			NS			0.48			NS			NS		
JPL2-AF35(2)	2/22/2007	250263	21			NS			NS			91			NS			8.2			NS			NS			3.5			NS			NS		
JPL2-AF36(2)	2/22/2007	250263	16			NS			NS			57			NS			6.5			NS			NS			0.58			NS			NS		
JPL2-TOTALMETAL-(F)	3/12/2007	250373	130			NS			NS			3100			NS			10			NS			NS			89			NS			NS		
JPL2-AP95(0.5)	3/13/2007	250378	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP96(0.5)	3/13/2007	250378	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP95-D(0.5)	3/13/2007	250378	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP96-D(0.5)	3/13/2007	250378	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
LF - lab flag
J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 20 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL5-L5(1)	1/9/2007	250012	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-HUMP2(1)	1/10/2007	250023	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-HUMP8(1)	1/10/2007	250023	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-HUMP9(1)	1/10/2007	250023	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP1(1)	1/12/2007	250051	100		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP2(1)	1/12/2007	250051	110		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP3(1)	1/12/2007	250051	350		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP4(1)	1/12/2007	250051	81		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP5(1)	1/12/2007	250051	150		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP6(1)	1/12/2007	250051	50		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP7(1)	1/12/2007	250051	36		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP8(1)	1/12/2007	250051	73		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP9(1)	1/12/2007	250051	60		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITFAF250(3)	12/27/2006	250056	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITFAF252(3)	12/27/2006	250056	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITFAF253(3)	12/27/2006	250056	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITFAF254(3)	12/27/2006	250056	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP1(1)	1/12/2007	250104	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP2(1)	1/12/2007	250104	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP5(1)	1/12/2007	250104	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CP19(1)	1/12/2007	250104	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AF12(2)	1/30/2007	250164	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP86(1)	1/30/2007	250164	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP87(1)	1/30/2007	250164	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-AP88(1)	1/30/2007	250164	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP255(2)	1/30/2007	250165	23			NS			0.57		U	NS			NS			NS			NS			NS			NS			1.1		U
JPM3-ITF-AP256(2)	1/30/2007	250165	25			NS			0.59		U	NS			NS			NS			NS			NS			NS			1.2		U
JPM3-ITF-AP257(2)	1/30/2007	250165	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP258(2)	1/30/2007	250165	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF259(2)	2/1/2007	250183	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF260(2)	2/1/2007	250183	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP103(1)	1/30/2007	250192	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF378(1)	2/9/2007	250224	20			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF97B(1)	2/9/2007	250224	83			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF49B(1)	2/9/2007	250224	23			NS			0.23		B	NS			NS			NS			NS			NS			NS			1.1		U
JPM3-ITF-AF208B(1)	2/9/2007	250224	13			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF209B(1)	2/9/2007	250224	21			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF205B(1)	2/9/2007	250224	31			NS			NS			NS			NS			NS			NS			NS			NS			1.2		U
JPM3-ITF-AF215B(1)	2/9/2007	250224	32			NS			NS			NS			NS			NS			NS			NS			NS			1.1		U
JPL2-AP53(1)	2/22/2007	250263	20			NS			0.52			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP54(1)	2/22/2007	250263	440			NS			3.2			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP55(1)	2/22/2007	250263	460			NS			25			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF34(2)	2/22/2007	250263	44			NS			0.13		B	NS			NS			NS			NS			NS			NS			NS		
JPL2-AF35(2)	2/22/2007	250263	43			NS			0.12		B	NS			NS			NS			NS			NS			NS			NS		
JPL2-AF36(2)	2/22/2007	250263	20			NS			0.12		B	NS			NS			NS			NS			NS			NS			NS		
JPL2-TOTALMETAL-(P	3/12/2007	250373	2900			NS			130			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP95(0.5)	3/13/2007	250378	48			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP96(0.5)	3/13/2007	250378	180			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP95-D(0.5)	3/13/2007	250378	100			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP96-D(0.5)	3/13/2007	250378	320			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 21 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL2-AP97(0.5)	3/15/2007	250399	17			NS			NS			80			NS			13			NS			NS			0.21	U		NS			NS		
JPL2-AF44(2)	3/15/2007	250399	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF45(2)	3/15/2007	250399	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP98(0.5)	3/17/2007	250415	83			NS			NS			530			NS			9.7			NS			NS			12			NS			NS		
JPL2-AP99(0.5)	3/17/2007	250415	100			0.26			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF46(2)	3/17/2007	250415	310			NS			NS			1900			NS			11			NS			NS			33			NS			NS		
JPL2-AF47(2)	3/17/2007	250415	18			NS			NS			76			NS			12			NS			NS			0.23	U		NS			NS		
JPL2-AF48(2)	3/17/2007	250415	17			NS			NS			58			NS			8.4			NS			NS			0.27	U		NS			NS		
JPL2-AP98(0.5)-D	3/17/2007	250415	54			NS			NS			340			NS			9.3			NS			NS			6.1			NS			NS		
JPL2-AF47(2)-D	3/17/2007	250415	19			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF49(2)	3/20/2007	250418	15			NS			NS			54			NS			7.5			NS			NS			0.22	U		NS			NS		
JPL2-AF50(3)	3/20/2007	250418	NS			NS			NS			NS			NS			11			NS			NS			NS			NS			NS		
JPL2-AP100(0.5)	3/20/2007	250418	22			NS			NS			82			NS			8.6			NS			NS			0.52			NS			NS		
JPL2-AP101(0.5)	3/26/2007	250429	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP102(0.5)	3/26/2007	250429	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF51(3)	3/26/2007	250429	NS			NS			NS			150			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP101(0.5)-D	3/26/2007	250429	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF51(3)-D	3/26/2007	250429	NS			NS			NS			140			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP103(0.5)	3/27/2007	250431	19			NS			NS			79			NS			12			NS			NS			0.24	U		NS			NS		
JPL2-AP104(0.5)	3/27/2007	250431	13			NS			NS			48			NS			7.8			NS			NS			0.24	U		NS			NS		
JPL2-AF52(2)	3/27/2007	250431	20			NS			NS			71			NS			13			NS			NS			0.24	U		NS			NS		
JPL2-AF53(2)	3/27/2007	250431	28			NS			NS			170			NS			13			NS			NS			2			NS			NS		
JPL2-AF53(2)-D	3/27/2007	250431	20			NS			NS			88			NS			13			NS			NS			0.23	U		NS			NS		
JPL2-AP105(0.5)	3/30/2007	250443	31			NS			NS			89			NS			12			NS			NS			0.18	B		NS			NS		
JPL2-AP106(0.5)	3/30/2007	250443	13			NS			NS			44			NS			8.6			NS			NS			0.1	B		NS			NS		
JPL2-AP107(0.5)	3/30/2007	250443	870			NS			NS			500			NS			12			NS			NS			6.1			NS			NS		
JPL2-AP108(0.5)	3/30/2007	250443	22			NS			NS			56			NS			7.6			NS			NS			0.2	B		NS			NS		
JPL2-AF54(2)	3/30/2007	250443	18			NS			NS			77			NS			13			NS			NS			0.17	B		NS			NS		
JPL2-AF55(2)	3/30/2007	250443	19			NS			NS			93			NS			14			NS			NS			0.38			NS			NS		
JPL2-AF56(2)	3/30/2007	250443	13			NS			NS			48			NS			6.2			NS			NS			0.12	B		NS			NS		
JPL23A-AF1(6)	4/5/2007	250472	12		J	NS			NS			59	J	0.84	B	J	8.8			NS			50			NS			18			NS			
JPL23A-AP1(1)	4/5/2007	250472	29		J	0.05	U		NS			78	J	1.4	B	J	9.3			NS			140			NS			19			NS			
JPL23A-AP2(4)	4/5/2007	250472	11		J	NS			NS			57	J	2.4	U	J	9.5			NS			52			NS			18			NS			
JPL23A-AP3(1)	4/5/2007	250472	54			NS			NS			140	J	2.5	B	J	11			NS			120			NS			24			NS			
JPL23A-AP4(4)	4/5/2007	250472	12			NS			NS			60			2.3	U	R	9.2			NS			59			NS			18			NS		
JPL23A-AP2(4)-D	4/5/2007	250472	12			NS			NS			55			0.52	B	J	8.7			NS			61			NS			19			NS		
JPL23A-AP3(1)-D	4/5/2007	250472	46			NS			NS			130			1.8	B	J	11			NS			120			NS			31			NS		
JPL23A-AP5(1)	4/6/2007	250479	15			NS			NS			51			2.2	U		5.2			NS			99			NS			21			NS		
JPL23A-AP6(4)	4/6/2007	250479	12			NS			NS			59			2.3	U		16			NS			58			NS			16			NS		
JPL23A-AF2(6)	4/6/2007	250479	11			NS			NS			56			0.53	B		10			NS			51			NS			18			NS		
JPL23A-AF5(1)-D	4/6/2007	250479	14			NS			NS			52			2.5	U		5.2			NS			99			NS			22			NS		
JPL23A-AP7(1)	4/9/2007	250483	17			NS			NS			64			0.7	B		13			NS			110			NS			22			NS		
JPL23A-AP8(4)	4/9/2007	250483	12			NS			NS			54			2.3	U		9.6			NS			59			NS			17			NS		
JPL23A-AP9(1)	4/9/2007	250483	58			NS			NS			84			2.3			9.2			NS			130			NS			22			NS		
JPL23A-AP10(4)	4/9/2007	250483	13			NS			NS			61			0.72	B		11			NS			48			NS			16			NS		
JPL23A-AF3(6)	4/9/2007	250483	11			NS			NS			51			2.3	U		7.6			NS			50			NS			17			NS		
JPL23A-AP11(1)	4/16/2007	250504	21			NS			NS			79			0.54	B		15			NS			150			NS			23			NS		
JPL23A-AP12(4)	4/16/2007	250504	11			NS			NS			60			2.3	U		10			NS			50			NS			16			NS		
JPL23A-AP13(1)	4/16/2007	250504	29			NS			NS			100			1.1	B		15			NS			110			NS			23			NS		
JPL23A-AP14(4)	4/16/2007	250504	13			NS			NS			61			2.2	U		10			NS			49			NS			17			NS		

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 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 22 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL2-AP97(0.5)	3/15/2007	250399	34			NS			0.53	U		NS			NS			NS			NS			NS			NS			NS		
JPL2-AF44(2)	3/15/2007	250399	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF45(2)	3/15/2007	250399	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP98(0.5)	3/17/2007	250415	380			NS			4.1			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP99(0.5)	3/17/2007	250415	1100			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF46(2)	3/17/2007	250415	4000			NS			18			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF47(2)	3/17/2007	250415	32			NS			0.19	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-AF48(2)	3/17/2007	250415	26			NS			0.32	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-AP98(0.5)-D	3/17/2007	250415	210			NS			3			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF47(2)-D	3/17/2007	250415	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF49(2)	3/20/2007	250418	21			NS			0.54	U		NS			NS			NS			NS			NS			NS			NS		
JPL2-AF50(3)	3/20/2007	250418	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP100(0.5)	3/20/2007	250418	37			NS			0.59	U		NS			NS			NS			NS			NS			NS			NS		
JPL2-AP101(0.5)	3/26/2007	250429	200			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP102(0.5)	3/26/2007	250429	150			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF51(3)	3/26/2007	250429	79		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP101(0.5)-D	3/26/2007	250429	670			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF51(3)-D	3/26/2007	250429	100		J	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP103(0.5)	3/27/2007	250431	31			NS			0.14	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-AP104(0.5)	3/27/2007	250431	21			NS			0.61	U	UB	NS			NS			NS			NS			NS			NS			NS		
JPL2-AF52(2)	3/27/2007	250431	32			NS			0.19	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-AF53(2)	3/27/2007	250431	110			NS			0.27	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-AF53(2)-D	3/27/2007	250431	46			NS			0.18	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-AP105(0.5)	3/30/2007	250443	31			NS			0.59	U		NS			NS			NS			NS			NS			NS			NS		
JPL2-AP106(0.5)	3/30/2007	250443	18			NS			0.59	U		NS			NS			NS			NS			NS			NS			NS		
JPL2-AP107(0.5)	3/30/2007	250443	680			NS			73			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP108(0.5)	3/30/2007	250443	21			NS			0.21	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-AF54(2)	3/30/2007	250443	30			NS			0.58	U		NS			NS			NS			NS			NS			NS			NS		
JPL2-AF55(2)	3/30/2007	250443	36			NS			0.54	U		NS			NS			NS			NS			NS			NS			NS		
JPL2-AF56(2)	3/30/2007	250443	17			NS			0.61	U		NS			NS			NS			NS			NS			NS			NS		
JPL23A-AF1(6)	4/5/2007	250472	24		J	NS			NS			27			NS			NS			NS			NS			NS			NS		
JPL23A-AP1(1)	4/5/2007	250472	21		J	NS			NS			18			NS			NS			NS			NS			NS			NS		
JPL23A-AP2(4)	4/5/2007	250472	24		J	NS			NS			11			NS			NS			NS			NS			NS			NS		
JPL23A-AP3(1)	4/5/2007	250472	34		J	NS			NS			24			NS			NS			NS			NS			NS			NS		
JPL23A-AP4(4)	4/5/2007	250472	25			NS			NS			29			NS			NS			NS			NS			NS			NS		
JPL23A-AP2(4)-D	4/5/2007	250472	24			NS			NS			33			NS			NS			NS			NS			NS			NS		
JPL23A-AP3(1)-D	4/5/2007	250472	46			NS			NS			24			NS			NS			NS			NS			NS			NS		
JPL23A-AP5(1)	4/6/2007	250479	19			NS			NS			16			NS			NS			NS			NS			NS			NS		
JPL23A-AP6(4)	4/6/2007	250479	23			NS			NS			26			NS			NS			NS			NS			NS			NS		
JPL23A-AF2(6)	4/6/2007	250479	25			NS			NS			28			NS			NS			NS			NS			NS			NS		
JPL23A-AF5(1)-D	4/6/2007	250479	19			NS			NS			16			NS			NS			NS			NS			NS			NS		
JPL23A-AP7(1)	4/9/2007	250483	28			NS			NS			31			NS			NS			NS			NS			NS			NS		
JPL23A-AP8(4)	4/9/2007	250483	25			NS			NS			29			NS			NS			NS			NS			NS			NS		
JPL23A-AP9(1)	4/9/2007	250483	19			NS			NS			17			NS			NS			NS			NS			NS			NS		
JPL23A-AP10(4)	4/9/2007	250483	25			NS			NS			24			NS			NS			NS			NS			NS			NS		
JPL23A-AF3(6)	4/9/2007	250483	21			NS			NS			26			NS			NS			NS			NS			NS			NS		
JPL23A-AP11(1)	4/16/2007	250504	27			NS			NS			38			NS			NS			NS			NS			NS			NS		
JPL23A-AP12(4)	4/16/2007	250504	23			NS			NS			27			NS			NS			NS			NS			NS			NS		
JPL23A-AP13(1)	4/16/2007	250504	35			NS			NS			38			NS			NS			NS			NS			NS			NS		
JPL23A-AP14(4)	4/16/2007	250504	24			NS			NS			29			NS			NS			NS			NS			NS			NS		

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Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 23 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL23A-AF4(6)	4/16/2007	250504	14			NS			NS			57			2.3	U		8.9			NS			51			NS			19			NS		
JPL23A-A13(1)-D	4/16/2007	250504	76			NS			NS			130			2.6			12			NS			100			NS			29			NS		
JPL23A-AP21(1)	4/23/2007	250534	12			NS			NS			48			0.59	B		NS			NS			100			NS			12			NS		
JPL23A-AP22(4)	4/23/2007	250534	14			NS			NS			62			0.6	B		NS			NS			56			NS			14			NS		
JPL23A-AF8(6)	4/23/2007	250534	13			NS			NS			60			0.45	B		NS			NS			51			NS			13			NS		
JPL23A-AF8(6)-D	4/23/2007	250534	15			NS			NS			63			0.45	B		NS			NS			45			NS			14			NS		
JPL23A-AP23(1)	4/24/2007	250536	17			NS			NS			81			0.97	B		NS			NS			24			NS			17			NS		
JPL23A-AP24(4)	4/24/2007	250536	12			NS			NS			57			0.57	B		NS			NS			62			NS			16			NS		
JPL23A-AP25(1)	4/24/2007	250536	13			NS			NS			57			0.62	B		NS			NS			63			NS			16			NS		
JPL23A-AP26(4)	4/24/2007	250536	14			NS			NS			59			0.7	B		NS			NS			59			NS			16			NS		
JPL23A-AP27(1)	4/24/2007	250536	16			NS			NS			57			0.79	B		NS			NS			110			NS			19			NS		
JPL23A-AP28(4)	4/24/2007	250536	16			NS			NS			60			0.63	B		NS			NS			68			NS			15			NS		
JPL23A-AP29(1)	4/24/2007	250536	14			NS			NS			64			0.54	B		NS			NS			100			NS			18			NS		
JPL23A-AP30(4)	4/24/2007	250536	12			NS			NS			56			0.51	B		NS			NS			54			NS			14			NS		
JPL23A-AF9(6)	4/24/2007	250536	8.9			NS			NS			48			2.3	U		NS			NS			49			NS			17			NS		
JPL23-AP15(1)	4/20/2007	250523	14			NS			NS			64			2.4	U		12			NS			70			NS			17			NS		
JPL23-AP16(4)	4/20/2007	250523	13			NS			NS			57			2.1	U		NS			NS			44			NS			15			NS		
JPL23-AP17(1)	4/20/2007	250523	190			NS			NS			850			18			NS			NS			200			NS			36			NS		
JPL23-AP18(4)	4/20/2007	250523	19			NS			NS			70			0.57	B		NS			NS			55			NS			16			NS		
JPL23-AP19(1)	4/20/2007	250523	20			NS			NS			76			1.2	B		NS			NS			160			NS			22			NS		
JPL23-AP20(4)	4/20/2007	250523	14			NS			NS			58			2.2	U		NS			NS			77			NS			15			NS		
JPL23-AF5(6)	4/20/2007	250523	11			NS			NS			54			2	U		8.2			NS			47			NS			18			NS		
JPL23-AF6(6)	4/20/2007	250523	12			NS			NS			57			2	U		8.5			NS			55			NS			17			NS		
JPL23-AF7(6)	4/20/2007	250523	30			NS			NS			95			1.3	B		NS			NS			70			NS			17			NS		
JPL23-AP17(1)-D	4/20/2007	250523	180			NS			NS			660			15			NS			NS			150			NS			38			NS		
JPL23-AP17(1)	4/20/2007	250541	NS			0.015	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL23-AP17(1)-D	4/20/2007	250541	NS			0.026	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-STOCKPILE-1	4/26/2007	250548	260			0.42			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-STOCKPILE-2	4/26/2007	250548	58			0.17	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-STOCKPILE-3	4/26/2007	250548	86			0.0068	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-STOCKPILE-4	4/26/2007	250548	30			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-STOCKPILE-5	4/26/2007	250548	430			0.035	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPLS-As(0.5)	4/27/2007	250551	NS			NS			NS			NS			NS			7.9			NS			NS			NS			NS			NS		
JPL23A-AP31(1)	4/30/2007	250557	NS			NS			NS			260			NS			NS			NS			NS			NS			NS			NS		
JPL23A-AF10(1)	5/1/2007	250560	13			NS			NS			50			1.7	B		NS			NS			54			NS			17			NS		
JPL23A-AF11(6)	5/1/2007	250560	12			NS			NS			60			0.88	B		NS			NS			49			NS			16			NS		
JPL23A-AF12(6)	5/1/2007	250560	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-STOCKPILE-1	4/22/2007	250561	NS			0.37			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-STOCKPILE-5	4/22/2007	250561	NS			0.046	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL23A-SP1(0.5)	5/3/2007	250573	540			NS			NS			710			18			NS			NS			340			NS			42			NS		
JPL23A-SP2(0.5)	5/3/2007	250573	100			NS			NS			220			4.2			NS			NS			50			NS			15			NS		
JPL23A-SP3(0.5)	5/3/2007	250573	16			NS			NS			55			0.62	B		NS			NS			65			NS			13			NS		
JPL23A-SP4(0.5)	5/3/2007	250573	110			NS			NS			270			5.1			NS			NS			98			NS			20			NS		
JPL23A-SP2(0.5)	5/3/2007	250586	NS			0.051			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL23A-SP4(0.5)	5/3/2007	250586	NS			0.012	B		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP109(0.5)	5/10/2007	250595	290			NS			NS			1700		J	NS			6.6			NS			NS			16		J	NS			NS		
JPL2-AP110(0.5)	5/10/2007	250595	39			J			NS			150		J	NS			7.6			NS			NS			4.4		J	NS			NS		
JPL2-AP111(0.5)	5/10/2007	250595	250			NS			NS			1400		J	NS			3.5			NS			NS			11		J	NS			NS		
JPL2-AF57(2)	5/11/2007	250597	17			NS			NS			51			NS			9.3			NS			NS			0.069	B		NS			NS		
JPL2-AF58(2)	5/11/2007	250597	25			NS			NS			66			NS			10			NS			NS			0.35			NS			NS		

B - blank contamination
LF - lab flag
J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium			
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	
JPL23A-AF4(6)	4/16/2007	250504	21			NS			NS			25			NS			NS			NS			NS			NS			NS			
JPL23A-A13(1)-D	4/16/2007	250504	34			NS			NS			34			NS			NS			NS			NS			NS			NS			
JPL23A-AP21(1)	4/23/2007	250534	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AP22(4)	4/23/2007	250534	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AF8(6)	4/23/2007	250534	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AF8(6)-D	4/23/2007	250534	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AP23(1)	4/24/2007	250536	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AP24(4)	4/24/2007	250536	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AP25(1)	4/24/2007	250536	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AP26(4)	4/24/2007	250536	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AP27(1)	4/24/2007	250536	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AP28(4)	4/24/2007	250536	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AP29(1)	4/24/2007	250536	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AP30(4)	4/24/2007	250536	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AF9(6)	4/24/2007	250536	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23-AP15(1)	4/20/2007	250523	NS			NS			NS			30			NS			NS			NS			NS			NS			NS			
JPL23-AP16(4)	4/20/2007	250523	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23-AP17(1)	4/20/2007	250523	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23-AP18(4)	4/20/2007	250523	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23-AP19(1)	4/20/2007	250523	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23-AP20(4)	4/20/2007	250523	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23-AF5(6)	4/20/2007	250523	23			NS			NS			23			NS			NS			NS			NS			NS			NS			
JPL23-AF6(6)	4/20/2007	250523	23			NS			NS			26			NS			NS			NS			NS			NS			NS			
JPL23-AF7(6)	4/20/2007	250523	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23-AP17(1)-D	4/20/2007	250523	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23-AP17(1)	4/20/2007	250541	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23-AP17(1)-D	4/20/2007	250541	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPM12-STOCKPILE-1(1)	4/26/2007	250548	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPM12-STOCKPILE-2(1)	4/26/2007	250548	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPM12-STOCKPILE-3(1)	4/26/2007	250548	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPM12-STOCKPILE-4(1)	4/26/2007	250548	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPM12-STOCKPILE-5(1)	4/26/2007	250548	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPLS-As(0.5)	4/27/2007	250551	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AP31(1)	4/30/2007	250557	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AF10(1)	5/1/2007	250560	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AF11(6)	5/1/2007	250560	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-AF12(6)	5/1/2007	250560	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPM12-STOCKPILE-1(1)	4/22/2007	250561	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPM12-STOCKPILE-5(1)	4/22/2007	250561	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-SP1(0.5)	5/3/2007	250573	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-SP2(0.5)	5/3/2007	250573	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-SP3(0.5)	5/3/2007	250573	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-SP4(0.5)	5/3/2007	250573	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-SP2(0.5)	5/3/2007	250586	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL23A-SP4(0.5)	5/3/2007	250586	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL2-AP109(0.5)	5/10/2007	250595	2100			NS			17		J	NS			NS			NS			NS			NS			NS			NS			
JPL2-AP110(0.5)	5/10/2007	250595	79		J	NS			0.24		B	J	NS			NS			NS			NS			NS			NS			NS		
JPL2-AP111(0.5)	5/10/2007	250595	7900			NS			1.6		J	NS			NS			NS			NS			NS			NS			NS			
JPL2-AF57(2)	5/11/2007	250597	19			NS			0.18		B	NS			NS			NS			NS			NS			NS			NS			
JPL2-AF58(2)	5/11/2007	250597	31			NS			0.37		B	NS			NS			NS			NS			NS			NS			NS			

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Res - result
SDG - sample delivery group
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Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL2-AP112(0.5)	5/11/2007	250597	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP113(0.5)	5/11/2007	250597	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP114(0.5)	5/11/2007	250597	62			NS			NS			270			NS			9.5			NS			7			NS			NS			NS		
JPL2-AF57(2)-D	5/11/2007	250597	17			NS			NS			56			NS			9			NS			0.09	B		NS			NS			NS		
JPL2-AP115(0.5)	5/15/2007	250603	75			NS			NS			300			NS			6.5			NS			6.4			NS			NS			NS		
JPL2-AP116(0.5)	5/15/2007	250603	93			NS			NS			600			NS			6.9			NS			5.7			NS			NS			NS		
JPL2-SP4(0)	5/16/2007	250606	92			NS			NS			440			NS			11			NS			3.9			NS			NS			NS		
JPL2-SP5(0)	5/16/2007	250606	230			NS			NS			1400			NS			9.9			NS			19			NS			NS			NS		
JPL2-SP6(0)	5/16/2007	250606	20			NS			NS			70			NS			4.2			NS			1.7			NS			NS			NS		
JPL2-SP7(0)	5/16/2007	250606	26			NS			NS			120			NS			7.3			NS			2.3			NS			NS			NS		
JPL2-AP117(0.5)	5/17/2007	500-4270	66			NS			NS			450			NS			9.1			NS			4.4			NS			NS			NS		
JPL2-AP118(0.5)	5/17/2007	500-4270	46		J	NS			NS			170		J	NS			9			NS			2.2			NS			NS			NS		
JPL2-AP119(0.5)	5/17/2007	500-4270	97			NS			NS			750			NS			9.5			NS			10			NS			NS			NS		
JPL2-AP120(0.5)	5/17/2007	500-4270	33		J	NS			NS			240			NS			8.8			NS			1.6			NS			NS			NS		
JPL2-PF1(2)	5/17/2007	500-4270	120			NS			NS			370			NS			12			NS			6.1			NS			NS			NS		
JPL2-PF2(2)	5/17/2007	500-4270	130			NS			NS			560			NS			8.8			NS			3.1			NS			NS			NS		
JPL2-PF3(2)	5/17/2007	500-4270	290			NS			NS			3600			NS			7.6			NS			20			NS			NS			NS		
JPL2-AP121(0.5)	5/18/2007	500-4287	36			NS			NS			540			NS			6.1			NS			2.1			NS			NS			NS		
JPL2-AP122(0.5)	5/21/2007	500-4317	23		J	NS			NS			99		J	NS			13			NS			0.68			NS			NS			NS		
JPL2-SP8(0.5)	5/21/2007	500-4317	1000			NS			NS			95		J	NS			8.8			NS			2.1			NS			NS			NS		
JPL2-SP9(0.5)	5/21/2007	500-4317	87			NS			NS			400			NS			9.1			NS			6.1			NS			NS			NS		
JPL2-AST-TF1(3)	5/21/2007	500-4317	16		J	NS			NS			67		J	NS			11			NS			0.18	J		NS			NS			NS		
JPL2-AST-TF2(4)	5/21/2007	500-4317	14		J	NS			NS			66		J	NS			11			NS			0.097	J		NS			NS			NS		
JPL2-AST-TP1(0.5)	5/21/2007	500-4317	13		J	NS			NS			46		J	NS			7.5			NS			0.2	J		NS			NS			NS		
JPL2-AST-TP2(0.5)	5/21/2007	500-4317	110			NS			NS			180		J	NS			7.3			NS			8.6			NS			NS			NS		
JPL2-AST-TP3(0.5)	5/21/2007	500-4317	24		J	NS			NS			76		J	NS			6.6			NS			1.5			NS			NS			NS		
JPL2-CP93(0.5)	5/23/2007	500-4362	89			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP94(0.5)	5/23/2007	500-4362	1900			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP123(0.5)	5/29/2007	500-4427	18			NS			NS			74		B	NS			6.2			NS			1.3			NS			NS			NS		
JPL2-AP124(0.5)	5/29/2007	500-4427	18			NS			NS			110		B	NS			15			NS			1.2			NS			NS			NS		
JPL2-PF4(4)	5/29/2007	500-4427	17			NS			NS			65		B	NS			15			NS			0.36			NS			NS			NS		
JPL2-PF5(4)	5/29/2007	500-4427	29			NS			NS			160		B	NS			11			NS			0.68			NS			NS			NS		
JPL2-PF6(4)	5/29/2007	500-4427	15			NS			NS			110		B	NS			17			NS			0.52			NS			NS			NS		
JPL23A-SP5(1)	5/30/2007	500-4447	30			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP125(0.5)	5/31/2007	500-4472	68			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP126(0.5)	5/31/2007	500-4472	33			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP127(0.5)	5/31/2007	500-4472	28			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP128(0.5)	5/31/2007	500-4472	40			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF59(2)	5/31/2007	500-4472	18			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF60(2)	5/31/2007	500-4472	15			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF61(2)	5/31/2007	500-4472	26			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-SP10(1)	5/31/2007	500-4472	14			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-SP11(1)	5/31/2007	500-4472	22			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP129(1)	6/6/2007	500-4561	43			NS			NS			890		B	NS			11			NS			1.5			NS			NS			NS		
JPL2-AP130(4)	6/6/2007	500-4561	24			NS			NS			240		B	NS			11			NS			0.82			NS			NS			NS		
JPL2-AP131(1)	6/6/2007	500-4561	15			NS			NS			51		B	NS			8.1			NS			0.25			NS			NS			NS		
JPL2-AP132(4)	6/6/2007	500-4561	540			NS			NS			4700		B	NS			14			NS			13			NS			NS			NS		
JPL2-AP133(1)	6/6/2007	500-4561	15			NS			NS			67		B	NS			9.5			NS			0.26			NS			NS			NS		
JPL2-AP134(4)	6/6/2007	500-4561	48			NS			NS			450		B	NS			8.6			NS			6.7			NS			NS			NS		
JPL2-AP135(1)	6/6/2007	500-4561	38			NS			NS			200		B	NS			11			NS			1.7			NS			NS			NS		

B - blank contamination
LF - lab flag
J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 26 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL2-AP112(0.5)	5/11/2007	250597	580			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP113(0.5)	5/11/2007	250597	9300			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP114(0.5)	5/11/2007	250597	190			NS			1.9			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF57(2)-D	5/11/2007	250597	32			NS			0.58	U	UB	NS			NS			NS			NS			NS			NS			NS		
JPL2-AP115(0.5)	5/15/2007	250603	770			NS			0.75			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP116(0.5)	5/15/2007	250603	610			NS			1.6			NS			NS			NS			NS			NS			NS			NS		
JPL2-SP4(0)	5/16/2007	250606	330			NS			3.2			NS			NS			NS			NS			NS			NS			NS		
JPL2-SP5(0)	5/16/2007	250606	1400			NS			17			NS			NS			NS			NS			NS			NS			NS		
JPL2-SP6(0)	5/16/2007	250606	46			NS			0.24	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-SP7(0)	5/16/2007	250606	120			NS			1.1			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP117(0.5)	5/17/2007	500-4270	390			NS			1.8			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP118(0.5)	5/17/2007	500-4270	130			NS			0.74			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP119(0.5)	5/17/2007	500-4270	650			NS			4.2			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP120(0.5)	5/17/2007	500-4270	190			NS			1.3			NS			NS			NS			NS			NS			NS			NS		
JPL2-PF1(2)	5/17/2007	500-4270	210			NS			3.5			NS			NS			NS			NS			NS			NS			NS		
JPL2-PF2(2)	5/17/2007	500-4270	290			NS			0.3	J		NS			NS			NS			NS			NS			NS			NS		
JPL2-PF3(2)	5/17/2007	500-4270	9100			NS			1.3			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP121(0.5)	5/18/2007	500-4287	200			NS			0.6			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP122(0.5)	5/21/2007	500-4317	80			J	NS		0.31	JB	B	NS			NS			NS			NS			NS			NS			NS		
JPL2-SP8(0.5)	5/21/2007	500-4317	52			J	NS		0.78	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-SP9(0.5)	5/21/2007	500-4317	890			NS			3	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-AST-TF1(3)	5/21/2007	500-4317	32			J	NS		0.28	JB	B	NS			NS			NS			NS			NS			NS			NS		
JPL2-AST-TF2(4)	5/21/2007	500-4317	28			J	NS		0.57	U	B	NS			NS			NS			NS			NS			NS			NS		
JPL2-AST-TP1(0.5)	5/21/2007	500-4317	19			J	NS		0.53	U	B	NS			NS			NS			NS			NS			NS			NS		
JPL2-AST-TP2(0.5)	5/21/2007	500-4317	180			NS			4.5	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-AST-TP3(0.5)	5/21/2007	500-4317	56			J	NS		1.3	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-CP93(0.5)	5/23/2007	500-4362	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP94(0.5)	5/23/2007	500-4362	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP123(0.5)	5/29/2007	500-4427	48			NS			2.1			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP124(0.5)	5/29/2007	500-4427	55			NS			0.44	J		NS			NS			NS			NS			NS			NS			NS		
JPL2-PF4(4)	5/29/2007	500-4427	24			NS			0.23	J		NS			NS			NS			NS			NS			NS			NS		
JPL2-PF5(4)	5/29/2007	500-4427	100			NS			0.44	J		NS			NS			NS			NS			NS			NS			NS		
JPL2-PF6(4)	5/29/2007	500-4427	32			NS			0.51	U		NS			NS			NS			NS			NS			NS			NS		
JPL23A-SP5(1)	5/30/2007	500-4447	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP125(0.5)	5/31/2007	500-4472	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP126(0.5)	5/31/2007	500-4472	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP127(0.5)	5/31/2007	500-4472	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP128(0.5)	5/31/2007	500-4472	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF59(2)	5/31/2007	500-4472	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF60(2)	5/31/2007	500-4472	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF61(2)	5/31/2007	500-4472	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-SP10(1)	5/31/2007	500-4472	14			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-SP11(1)	5/31/2007	500-4472	30			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP129(1)	6/6/2007	500-4561	330			NS			68			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP130(4)	6/6/2007	500-4561	66			NS			33			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP131(1)	6/6/2007	500-4561	20			NS			0.3	J		NS			NS			NS			NS			NS			NS			NS		
JPL2-AP132(4)	6/6/2007	500-4561	2600			NS			69			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP133(1)	6/6/2007	500-4561	34			NS			0.26	J		NS			NS			NS			NS			NS			NS			NS		
JPL2-AP134(4)	6/6/2007	500-4561	670			NS			0.74			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP135(1)	6/6/2007	500-4561	210			NS			2			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
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 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 27 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPL2-AP136(4)	6/6/2007	500-4561	20			NS			NS			64	B		NS			27			NS			NS			0.39			NS			NS		
JPL2-AF62(10)	6/6/2007	500-4561	56			NS			NS			680	B		NS			11			NS			NS			2.7			NS			NS		
JPWR367-2W-1	6/7/2007	500-4599	25			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-2	6/7/2007	500-4599	23			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-4	6/7/2007	500-4599	27			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-5	6/7/2007	500-4599	23			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-7	6/7/2007	500-4599	33			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-8	6/7/2007	500-4599	26			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-10	6/7/2007	500-4599	29			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-11	6/7/2007	500-4599	39			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-12	6/7/2007	500-4599	27			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-14	6/7/2007	500-4599	56			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-15	6/7/2007	500-4599	29			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-16	6/7/2007	500-4599	36			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-4-D	6/7/2007	500-4599	29			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-8-D	6/7/2007	500-4599	22			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-1	6/7/2007	500-4602	26			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-3	6/7/2007	500-4602	22			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-4	6/7/2007	500-4602	22			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-6	6/7/2007	500-4602	22			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-7	6/7/2007	500-4602	32			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-8	6/7/2007	500-4602	28			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-9	6/7/2007	500-4602	25			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-11	6/7/2007	500-4602	27			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-12	6/7/2007	500-4602	23			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-13	6/7/2007	500-4602	800			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-15	6/7/2007	500-4602	40			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-16	6/7/2007	500-4602	54			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-9-D	6/7/2007	500-4602	35			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-12-D	6/7/2007	500-4602	110			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-SP12(0.5)	6/8/2007	500-4630	130			NS			NS			810	B		NS			11			NS			NS			6.4			NS			NS		
JPL2-SP13(0.5)	6/8/2007	500-4630	69			NS			NS			360	B		NS			9.9			NS			NS			6.3			NS			NS		
JPL2-SP14(0.5)	6/8/2007	500-4630	2600			NS			NS			56000	B		NS			10			NS			NS			25			NS			NS		
JPL2-SP15(0.5)	6/8/2007	500-4630	78			NS			NS			520	B		NS			9.9			NS			NS			6.6			NS			NS		
JPL2-SP16(0.5)	6/8/2007	500-4630	28			NS			NS			160	B		NS			12			NS			NS			1.7			NS			NS		
JPWR-369-1W-1	6/11/2007	500-4661	57		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-2	6/11/2007	500-4661	24		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-3	6/11/2007	500-4661	23		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-5	6/11/2007	500-4661	17		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-7	6/11/2007	500-4661	27		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-8	6/11/2007	500-4661	22		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-10	6/11/2007	500-4661	34		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-11	6/11/2007	500-4661	22		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-12	6/11/2007	500-4661	74			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-13	6/11/2007	500-4661	23		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-14	6/11/2007	500-4661	22		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-16	6/11/2007	500-4661	31		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-5-D	6/11/2007	500-4661	15		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-14-D	6/11/2007	500-4661	18		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-2	6/11/2007	500-4662	22		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 28 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL2-AP136(4)	6/6/2007	500-4561	34			NS			0.25	J	NS			NS			NS			NS			NS			NS			NS			
JPL2-AF62(10)	6/6/2007	500-4561	130			NS			29		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-1	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-2	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-4	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-5	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-7	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-8	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-10	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-11	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-12	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-14	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-15	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-16	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-4-D	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR367-2W-8-D	6/7/2007	500-4599	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-1	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-3	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-4	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-6	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-7	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-8	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-9	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-11	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-12	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-13	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-15	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-16	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-9-D	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR368-2E-12-D	6/7/2007	500-4602	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL2-SP12(0.5)	6/8/2007	500-4630	3000	B		NS			140		NS			NS			NS			NS			NS			NS			NS			
JPL2-SP13(0.5)	6/8/2007	500-4630	230	B		NS			2.7		NS			NS			NS			NS			NS			NS			NS			
JPL2-SP14(0.5)	6/8/2007	500-4630	120000	B		NS			11		NS			NS			NS			NS			NS			NS			NS			
JPL2-SP15(0.5)	6/8/2007	500-4630	560	B		NS			6.3		NS			NS			NS			NS			NS			NS			NS			
JPL2-SP16(0.5)	6/8/2007	500-4630	120	B		NS			0.47	J	NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-1	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-2	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-3	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-5	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-7	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-8	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-10	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-11	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-12	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-13	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-14	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-16	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-5-D	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR-369-1W-14-D	6/11/2007	500-4661	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPWR370-1E-2	6/11/2007	500-4662	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 29 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPWR370-1E-3	6/11/2007	500-4662	22		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-5	6/11/2007	500-4662	18		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-6	6/11/2007	500-4662	17		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-8	6/11/2007	500-4662	17		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-9	6/11/2007	500-4662	14		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-11	6/11/2007	500-4662	27		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-12	6/11/2007	500-4662	13		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-13	6/11/2007	500-4662	12		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-14	6/11/2007	500-4662	19		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-15	6/11/2007	500-4662	27		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-16	6/11/2007	500-4662	22		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-13-D	6/11/2007	500-4662	20		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-15-D	6/11/2007	500-4662	16		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP1(0.5)	6/12/2007	500-4685	110			NS			NS			330	B		NS			NS			NS			NS			NS			NS			NS		
JPL5-AP2(0.5)	6/12/2007	500-4685	16			NS			NS			84	B		NS			NS			NS			NS			NS			NS			NS		
JPL5-AP3(0.5)	6/12/2007	500-4685	16			NS			NS			60	B		NS			NS			NS			NS			NS			NS			NS		
JPL5-AP4(0.5)	6/12/2007	500-4685	24			NS			NS			98	B		NS			NS			NS			NS			NS			NS			NS		
JPL5-AF1(1)	6/12/2007	500-4685	18			NS			NS			73	B		NS			NS			NS			NS			NS			NS			NS		
JPL5-AF2(1)	6/12/2007	500-4685	16			NS			NS			79	B		NS			NS			NS			NS			NS			NS			NS		
JPL5-AF3(1)	6/12/2007	500-4685	15			NS			NS			61	B		NS			NS			NS			NS			NS			NS			NS		
JPL5-AF3(1)-D	6/12/2007	500-4685	13			NS			NS			60	B		NS			NS			NS			NS			NS			NS			NS		
JPL5-AP1-(0.5)	6/18/2007	500-4792	32			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP2-(0.5)	6/18/2007	500-4792	53			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP3-(0.5)	6/18/2007	500-4792	19			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP4-(0.5)	6/18/2007	500-4792	16			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF1-(3)	6/18/2007	500-4792	14			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF2-(3)	6/18/2007	500-4792	16			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF3-(3)	6/18/2007	500-4792	59			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF4-(3)	6/18/2007	500-4792	12			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AF4(1)	6/19/2007	500-4814	19			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AF5(1)	6/19/2007	500-4814	17			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AF6(1)	6/19/2007	500-4814	21			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP4(0.5)	6/19/2007	500-4814	21			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP5(0.5)	6/19/2007	500-4814	17			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP6(0.5)	6/19/2007	500-4814	19			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP7(0.5)	6/19/2007	500-4814	17			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF5(3)	6/21/2007	500-4870	25			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF6(3)	6/21/2007	500-4870	12			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF7(3)	6/21/2007	500-4870	14			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF8(3)	6/21/2007	500-4870	14			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP5(0.5)	6/21/2007	500-4870	31			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP6(0.5)	6/21/2007	500-4870	22			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP7(0.5)	6/21/2007	500-4870	40			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP8(0.5)	6/21/2007	500-4870	20			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP9(0.5)	6/21/2007	500-4870	24			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP9(0.5)-D	6/21/2007	500-4870	25			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-1(3)	6/22/2007	500-4954	15		B	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-2(3)	6/22/2007	500-4954	12		B	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-3(3)	6/22/2007	500-4954	13		B	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-4(3)	6/22/2007	500-4954	15		B	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 30 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPWR370-1E-3	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-5	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-6	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-8	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-9	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-11	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-12	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-13	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-14	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-15	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-16	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-13-D	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-15-D	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP1(0.5)	6/12/2007	500-4685	190			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP2(0.5)	6/12/2007	500-4685	40			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP3(0.5)	6/12/2007	500-4685	28			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP4(0.5)	6/12/2007	500-4685	35			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF1(1)	6/12/2007	500-4685	31			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF2(1)	6/12/2007	500-4685	30			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF3(1)	6/12/2007	500-4685	20			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF3(1)-D	6/12/2007	500-4685	19			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP1-(0.5)	6/18/2007	500-4792	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP2-(0.5)	6/18/2007	500-4792	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP3-(0.5)	6/18/2007	500-4792	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP4-(0.5)	6/18/2007	500-4792	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF1-(3)	6/18/2007	500-4792	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF2-(3)	6/18/2007	500-4792	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF3-(3)	6/18/2007	500-4792	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF4-(3)	6/18/2007	500-4792	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AF4(1)	6/19/2007	500-4814	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AF5(1)	6/19/2007	500-4814	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AF6(1)	6/19/2007	500-4814	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP4(0.5)	6/19/2007	500-4814	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP5(0.5)	6/19/2007	500-4814	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP6(0.5)	6/19/2007	500-4814	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP7(0.5)	6/19/2007	500-4814	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF5(3)	6/21/2007	500-4870	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF6(3)	6/21/2007	500-4870	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF7(3)	6/21/2007	500-4870	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF8(3)	6/21/2007	500-4870	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP5(0.5)	6/21/2007	500-4870	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP6(0.5)	6/21/2007	500-4870	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP7(0.5)	6/21/2007	500-4870	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP8(0.5)	6/21/2007	500-4870	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP9(0.5)	6/21/2007	500-4870	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP9(0.5)-D	6/21/2007	500-4870	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-1(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-2(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-3(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-4(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 31 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL5-5(3)	6/22/2007	500-4954	13	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-6(3)	6/22/2007	500-4954	14	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-7(3)	6/22/2007	500-4954	14	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-8(3)	6/22/2007	500-4954	21	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-9(3)	6/22/2007	500-4954	16	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-10(3)	6/22/2007	500-4954	17	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-11(3)	6/22/2007	500-4954	18	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-12(3)	6/22/2007	500-4954	22	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-13(D)	6/22/2007	500-4954	81	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-10-D(3)	6/22/2007	500-4954	15	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-BARREL-White S	7/2/2007	500-5055	NS			NS			NS			NS			3.7	U	UJ	NS			NS			NS			NS			NS			NS		
JPM4-AF7(1)	7/9/2007	500-5122	25000	B		82			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP11(0.5)	7/9/2007	500-5122	21	B	B, J	0.023	J	B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP12(0.5)	7/9/2007	500-5122	130	B		0.031	J	B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP13(0.5)	7/9/2007	500-5122	18000	B		20			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP14(0.5)	7/9/2007	500-5122	290	B		0.054		B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-1(3)	7/13/2007	500-5265	140			NS			NS			870	B		NS			12			NS			NS			NS			NS			NS		
JPL5-PCN-2(3)	7/13/2007	500-5265	250			NS			NS			470	B		NS			8.8			NS			NS			NS			NS			NS		
JPL5-PCN-3(3)	7/13/2007	500-5265	93			NS			NS			1700	B		NS			12			NS			NS			NS			NS			NS		
JPL5-PCN-4(3)	7/13/2007	500-5265	28		J	NS			NS			130	B	J	NS			12			NS			NS			NS			NS			NS		
JPL5-PCN-5(3)	7/13/2007	500-5265	23		J	NS			NS			95	B	J	NS			16			NS			NS			NS			NS			NS		
JPL5-PCN-6(3)	7/13/2007	500-5265	29		J	NS			NS			120	B	J	NS			15			NS			NS			NS			NS			NS		
JPL5-PCN-7(3)	7/13/2007	500-5265	35		J	NS			NS			130	B	J	NS			12			NS			NS			NS			NS			NS		
JPL5-PCN-8(3)	7/13/2007	500-5265	79			NS			NS			440	B		NS			16			NS			NS			NS			NS			NS		
JPL5-PCN-9(3)	7/13/2007	500-5265	220			NS			NS			550	B		NS			18			NS			NS			NS			NS			NS		
JPL5-PCN-10(3)	7/13/2007	500-5265	430			NS			NS			800	B		NS			24			NS			NS			NS			NS			NS		
JPL5-PCN-11(3)	7/16/2007	500-5285	14			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-12(3)	7/16/2007	500-5285	20			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-13(3)	7/16/2007	500-5285	17			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-14(3)	7/16/2007	500-5285	35			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-15(3)	7/16/2007	500-5285	58			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-16(3)	7/16/2007	500-5285	16			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-17(3)	7/16/2007	500-5285	25			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-18(3)	7/16/2007	500-5285	16			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-19(3)	7/16/2007	500-5285	18			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-20(3)	7/16/2007	500-5285	37			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-21(3)	7/16/2007	500-5285	18			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-22(3)	7/16/2007	500-5285	27			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-23(3)	7/16/2007	500-5285	15			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-24(3)	7/16/2007	500-5285	24			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-25(3)	7/16/2007	500-5285	21			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP15(0.5)	7/16/2007	500-5286	21000			20			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP16(0.5)	7/16/2007	500-5286	79			0.013	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP17(0.5)	7/16/2007	500-5286	55			0.011	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP18(0.5)	7/16/2007	500-5286	27			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP19(0.5)	7/16/2007	500-5286	39			0.0065	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP20(0.5)	7/16/2007	500-5286	32			0.023	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-14(3)	7/17/2007	500-5306	14	B	J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-15(0)	7/17/2007	500-5306	72	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-Ditch-1(0)	7/18/2007	500-5347	NS			NS			NS			NS			NS			18		J	NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL5-5(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-6(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-7(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-8(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-9(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-10(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-11(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-12(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-13(D)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-10-D(3)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-BARREL-White S	7/2/2007	500-5055	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AF7(1)	7/9/2007	500-5122	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP11(0.5)	7/9/2007	500-5122	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP12(0.5)	7/9/2007	500-5122	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP13(0.5)	7/9/2007	500-5122	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP14(0.5)	7/9/2007	500-5122	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-1(3)	7/13/2007	500-5265	280			NS			NS			NS			NS			NS			NS			NS			NS			1		U
JPL5-PCN-2(3)	7/13/2007	500-5265	110			NS			NS			NS			NS			NS			NS			NS			NS			1.1		U
JPL5-PCN-3(3)	7/13/2007	500-5265	340			NS			NS			NS			NS			NS			NS			NS			NS			1		U
JPL5-PCN-4(3)	7/13/2007	500-5265	38		J	NS			NS			NS			NS			NS			NS			NS			NS			0.66		J
JPL5-PCN-5(3)	7/13/2007	500-5265	33		J	NS			NS			NS			NS			NS			NS			NS			NS			0.65		J
JPL5-PCN-6(3)	7/13/2007	500-5265	42		J	NS			NS			NS			NS			NS			NS			NS			NS			0.88		J
JPL5-PCN-7(3)	7/13/2007	500-5265	39		J	NS			NS			NS			NS			NS			NS			NS			NS			0.67		J
JPL5-PCN-8(3)	7/13/2007	500-5265	110			NS			NS			NS			NS			NS			NS			NS			NS			1.1		U
JPL5-PCN-9(3)	7/13/2007	500-5265	150			NS			NS			NS			NS			NS			NS			NS			NS			1		U
JPL5-PCN-10(3)	7/13/2007	500-5265	460			NS			NS			NS			NS			NS			NS			NS			NS			0.45		J
JPL5-PCN-11(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-12(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-13(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-14(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-15(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-16(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-17(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-18(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-19(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-20(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-21(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-22(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-23(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-24(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN-25(3)	7/16/2007	500-5285	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP15(0.5)	7/16/2007	500-5286	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP16(0.5)	7/16/2007	500-5286	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP17(0.5)	7/16/2007	500-5286	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP18(0.5)	7/16/2007	500-5286	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP19(0.5)	7/16/2007	500-5286	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP20(0.5)	7/16/2007	500-5286	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-14(3)	7/17/2007	500-5306	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-15(0)	7/17/2007	500-5306	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-Ditch-1(0)	7/18/2007	500-5347	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL3-Ditch-2(0)	7/18/2007	500-5347	NS			NS			NS			NS			NS			7.9	J	NS			NS			NS			NS			NS			
JPL3-Ditch-3(0)	7/18/2007	500-5347	NS			NS			NS			NS			NS			11	J	NS			NS			NS			NS			NS			
JPL3-Ditch-4(0)	7/18/2007	500-5347	NS			NS			NS			NS			NS			7.9	J	NS			NS			NS			NS			NS			
JPL3-Barrel-White Sub	7/2/2007	500-5352	11			NS			NS			NS			NS			NS					NS			NS			NS			NS			
JPL5-AP10(0.5)	7/23/2007	500-5499	59			NS			NS			380	B		1.5	J		14					NS			NS			3.6			NS			
JPL5-AP11(0.5)	7/23/2007	500-5499	29		J	NS			NS			78	B		0.82	J		6.1					NS			NS			1.3			NS			
JPL5-AP12(0.5)	7/23/2007	500-5499	18		J	NS			NS			60	B		2.1			9.9					NS			NS			0.46			NS			
JPL5-AP13(0.5)	7/23/2007	500-5499	20		J	NS			NS			64	B		2.2			9.9					NS			NS			0.58			NS			
JPL5-AP14(0.5)	7/23/2007	500-5499	16		J	NS			NS			68	B		1	J		5.7					NS			NS			0.87			NS			
JPL5-AP15(0.5)	7/23/2007	500-5499	20		J	NS			NS			43	B		0.61	J		34					NS			NS			0.39			NS			
JPL5-AP16(0.5)	7/23/2007	500-5499	13		J	NS			NS			59	B		2			5.6					NS			NS			0.36			NS			
JPL5-AP17(0.5)	7/23/2007	500-5499	14		J	NS			NS			51	B		1	J		8.9					NS			NS			0.21	J		NS			
JPL5-AP18(0.5)	7/23/2007	500-5499	16		J	NS			NS			52	B		2.2			7.3					NS			NS			0.2	J		NS			
JPL5-AP19(0.5)	7/23/2007	500-5499	13		J	NS			NS			45	B		2.2			10					NS			NS			0.22			NS			
JPL5-AP20(0.5)	7/23/2007	500-5499	16		J	NS			NS			50	B		2			9.5					NS			NS			0.1	J		NS			
JPL5-AP21(0.5)	7/23/2007	500-5499	16		J	NS			NS			51	B		2.1			8.3					NS			NS			0.086	J		NS			
JPL5-AP22(0.5)	7/23/2007	500-5499	21		J	NS			NS			61	B		2.4			8.3					NS			NS			0.32			NS			
JPL5-AP23(0.5)	7/23/2007	500-5499	13		J	NS			NS			47	B		2			6.7					NS			NS			0.11	J		NS			
JPL5-AP24(0.5)	7/23/2007	500-5499	16		J	NS			NS			49	B		2.1			7.4					NS			NS			0.2	J		NS			
JPL5-AP25(0.5)	7/23/2007	500-5499	18		J	NS			NS			48	B		1.9			7.7					NS			NS			0.16	J		NS			
JPL5-AP26(0.5)	7/23/2007	500-5499	16		J	NS			NS			47	B		2.2			9.3					NS			NS			0.1	J		NS			
JPL5-AP27(0.5)	7/23/2007	500-5499	13		J	NS			NS			44	B		2.2			6.1					NS			NS			0.22			NS			
JPL5-AP28(0.5)	7/23/2007	500-5499	22		J	NS			NS			66	B		2.2			6.2					NS			NS			1.3			NS			
JPL5-AP29(0.5)	7/23/2007	500-5499	24		J	NS			NS			71	B		2.3			9					NS			NS			0.63			NS			
JPL5-AP30(0.5)	7/23/2007	500-5499	16		J	NS			NS			64	B		2.5			6.2					NS			NS			0.48			NS			
JPL5-AP31(0.5)	7/23/2007	500-5499	14		J	NS			NS			38	B		2.2			5.8					NS			NS			0.18	J		NS			
JPL5-AP32(0.5)	7/23/2007	500-5499	14		J	NS			NS			59	B		2.1			5.1					NS			NS			0.44			NS			
JPL5-AP33(0.5)	7/23/2007	500-5499	16		J	NS			NS			49	B		2			7.5					NS			NS			0.25			NS			
JPL5-AP34(0.5)	7/23/2007	500-5501	15			NS			NS			46	B		0.68	J	J	66					NS			NS			0.21			NS			
JPL5-AP35(0.5)	7/23/2007	500-5501	16			NS			NS			50	B		2	U	R	8					NS			NS			0.22			NS			
JPL5-AP36(0.5)	7/23/2007	500-5501	22			NS			NS			81	B		1	J	J	6.7					NS			NS			0.78			NS			
JPL5-AF9(3)	7/23/2007	500-5501	16			NS			NS			79	B		0.77	J	J	12					NS			NS			0.62			NS			
JPL5-AF10(3)	7/23/2007	500-5501	15			NS			NS			64	B		2.2	U	R	9.2					NS			NS			1.5			NS			
JPL5-AF11(3)	7/23/2007	500-5501	11			NS			NS			44	B		1.8	U	R	9.8					NS			NS			0.24			NS			
JPL5-AF12(3)	7/23/2007	500-5501	12			NS			NS			61	B		0.77	J	J	10					NS			NS			0.37			NS			
JPL5-AF13(3)	7/23/2007	500-5501	14		J	NS			NS			69	B		0.59	J	J	5.2					NS			NS			0.41			NS			
JPL5-AF14(3)	7/23/2007	500-5501	16		J	NS			NS			52	B		2	U	R	12					NS			NS			0.39			NS			
JPL5-AF15(3)	7/23/2007	500-5501	17		J	NS			NS			66	B		0.93	J	J	11					NS			NS			0.46			NS			
JPL5-AF16(3)	7/23/2007	500-5501	14		J	NS			NS			62	B		2.2	U	R	11					NS			NS			0.27			NS			
JPL5-AF17(3)	7/23/2007	500-5501	19		J	NS			NS			66	B		2	U	R	8.8					NS			NS			0.24			NS			
JPL5-AF18(3)	7/23/2007	500-5501	13		J	NS			NS			53	B		0.88	J	J	5.8					NS			NS			0.25			NS			
JPL5-AF19(3)	7/23/2007	500-5501	46			NS			NS			60	B		1.9	U	R	22					NS			NS			0.47			NS			
JPL5-AF20(3)	7/23/2007	500-5501	13			NS			NS			63	B		0.84	J	J	8.6					NS			NS			0.29			NS			
JPL5-AF21(3)	7/23/2007	500-5501	20			NS			NS			43	B		1.3	J	J	74					NS			NS			0.55			NS			
JPL5-AF20(3)-D	7/23/2007	500-5501	14			NS			NS			63	B		0.64	J	J	11					NS			NS			0.37			NS			
JPL5-AF21(3)-D	7/23/2007	500-5501	14			NS			NS			40	B		1.7	U	R	17					NS			NS			0.23			NS			
JPL3-Ditch-1(0)	7/18/2007	500-5529	NS			NS			NS			NS			NS			NS					0.05	U		NS			NS			NS			
JPL3-GENFILL	7/30/2007	500-5635	18			NS			0.045			NS			NS			8.3					NS			83			2.1			12	B		
JPL3-Topsoil	7/30/2007	500-5635	170			NS			0.066			NS			NS			7.6					NS			74			0.85			15	B		
JPM4-AF8(4)	7/31/2007	500-5658	690			0.12			NS			NS			NS			NS					NS			NS			NS			NS			

B - blank contamination
LF - lab flag
J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 34 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL3-Ditch-2(0)	7/18/2007	500-5347	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-Ditch-3(0)	7/18/2007	500-5347	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-Ditch-4(0)	7/18/2007	500-5347	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-Barrel-White Sub	7/2/2007	500-5352	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP10(0.5)	7/23/2007	500-5499	63			NS			0.4	J	NS			NS			NS			NS			NS			NS			0.9	J		
JPL5-AP11(0.5)	7/23/2007	500-5499	20			NS			0.45		NS			NS			NS			NS			NS			NS			0.67	J		
JPL5-AP12(0.5)	7/23/2007	500-5499	27			NS			0.52		NS			NS			NS			NS			NS			NS			0.99	J		
JPL5-AP13(0.5)	7/23/2007	500-5499	23			NS			0.56		NS			NS			NS			NS			NS			NS			0.74	J		
JPL5-AP14(0.5)	7/23/2007	500-5499	28			NS			0.54		NS			NS			NS			NS			NS			NS			1.1			
JPL5-AP15(0.5)	7/23/2007	500-5499	20			NS			0.5		NS			NS			NS			NS			NS			NS			1.3			
JPL5-AP16(0.5)	7/23/2007	500-5499	21			NS			0.5		NS			NS			NS			NS			NS			NS			0.5	J		
JPL5-AP17(0.5)	7/23/2007	500-5499	20			NS			0.58		NS			NS			NS			NS			NS			NS			1.2			
JPL5-AP18(0.5)	7/23/2007	500-5499	16			NS			0.54		NS			NS			NS			NS			NS			NS			1	J		
JPL5-AP19(0.5)	7/23/2007	500-5499	14			NS			0.54		NS			NS			NS			NS			NS			NS			0.61	J		
JPL5-AP20(0.5)	7/23/2007	500-5499	19			NS			0.49		NS			NS			NS			NS			NS			NS			1.6			
JPL5-AP21(0.5)	7/23/2007	500-5499	18			NS			0.52		NS			NS			NS			NS			NS			NS			1.3			
JPL5-AP22(0.5)	7/23/2007	500-5499	17			NS			0.6		NS			NS			NS			NS			NS			NS			1	J		
JPL5-AP23(0.5)	7/23/2007	500-5499	15			NS			0.5		NS			NS			NS			NS			NS			NS			0.76	J		
JPL5-AP24(0.5)	7/23/2007	500-5499	16			NS			0.51		NS			NS			NS			NS			NS			NS			1.4			
JPL5-AP25(0.5)	7/23/2007	500-5499	18			NS			0.48		NS			NS			NS			NS			NS			NS			1.4			
JPL5-AP26(0.5)	7/23/2007	500-5499	17			NS			0.54		NS			NS			NS			NS			NS			NS			0.69	J		
JPL5-AP27(0.5)	7/23/2007	500-5499	14			NS			0.54		NS			NS			NS			NS			NS			NS			0.92	J		
JPL5-AP28(0.5)	7/23/2007	500-5499	20			NS			0.56		NS			NS			NS			NS			NS			NS			1.3			
JPL5-AP29(0.5)	7/23/2007	500-5499	23			NS			0.57		NS			NS			NS			NS			NS			NS			0.76	J		
JPL5-AP30(0.5)	7/23/2007	500-5499	26			NS			0.64		NS			NS			NS			NS			NS			NS			1.3			
JPL5-AP31(0.5)	7/23/2007	500-5499	16			NS			0.56		NS			NS			NS			NS			NS			NS			0.74	J		
JPL5-AP32(0.5)	7/23/2007	500-5499	22			NS			0.52		NS			NS			NS			NS			NS			NS			0.73	J		
JPL5-AP33(0.5)	7/23/2007	500-5499	16			NS			0.51		NS			NS			NS			NS			NS			NS			1.3			
JPL5-AP34(0.5)	7/23/2007	500-5501	13			NS			0.51	U	NS			NS			NS			NS			NS			NS			1			
JPL5-AP35(0.5)	7/23/2007	500-5501	17			NS			0.5	U	NS			NS			NS			NS			NS			NS			1.3			
JPL5-AP36(0.5)	7/23/2007	500-5501	24			NS			0.53	U	NS			NS			NS			NS			NS			NS			0.56	J		
JPL5-AF9(3)	7/23/2007	500-5501	25			NS			0.54	U	NS			NS			NS			NS			NS			NS			1.1			
JPL5-AF10(3)	7/23/2007	500-5501	29			NS			0.18	J	NS			NS			NS			NS			NS			NS			0.91	J		
JPL5-AF11(3)	7/23/2007	500-5501	19			NS			0.44	U	NS			NS			NS			NS			NS			NS			1.1			
JPL5-AF12(3)	7/23/2007	500-5501	25			NS			0.48	U	NS			NS			NS			NS			NS			NS			1.6			
JPL5-AF13(3)	7/23/2007	500-5501	36			NS			0.49	U	NS			NS			NS			NS			NS			NS			0.99	U		
JPL5-AF14(3)	7/23/2007	500-5501	24			NS			0.51	U	NS			NS			NS			NS			NS			NS			1.5			
JPL5-AF15(3)	7/23/2007	500-5501	25			NS			0.52	U	NS			NS			NS			NS			NS			NS			0.52	J		
JPL5-AF16(3)	7/23/2007	500-5501	22			NS			0.54	U	NS			NS			NS			NS			NS			NS			1.1	U		
JPL5-AF17(3)	7/23/2007	500-5501	21			NS			0.51	U	NS			NS			NS			NS			NS			NS			1.4			
JPL5-AF18(3)	7/23/2007	500-5501	19			NS			0.49	U	NS			NS			NS			NS			NS			NS			0.97	U		
JPL5-AF19(3)	7/23/2007	500-5501	23			NS			0.49	U	NS			NS			NS			NS			NS			NS			1.1			
JPL5-AF20(3)	7/23/2007	500-5501	25			NS			0.52	U	NS			NS			NS			NS			NS			NS			1.5			
JPL5-AF21(3)	7/23/2007	500-5501	30			NS			0.11	J	NS			NS			NS			NS			NS			NS			0.69	J		
JPL5-AF20(3)-D	7/23/2007	500-5501	27			NS			0.51	U	NS			NS			NS			NS			NS			NS			1.4			
JPL5-AF21(3)-D	7/23/2007	500-5501	19			NS			0.43	U	NS			NS			NS			NS			NS			NS			0.73	J		
JPL3-Ditch-1(0)	7/18/2007	500-5529	NS			NS			NS					NS			NS			NS			NS			NS			NS			
JPL3-GENFILL	7/30/2007	500-5635	NS			0.68	J		0.23	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-Topsoil	7/30/2007	500-5635	NS			1.1	U		0.87		NS			NS			NS			NS			NS			NS			NS			
JPM4-AF8(4)	7/31/2007	500-5658	NS			NS			NS					NS			NS			NS			NS			NS			NS			

B - blank contamination
LF - lab flag
J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
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Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 35 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM4-AF9(4)	7/31/2007	500-5658	100			0.27			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AF10(4)	7/31/2007	500-5658	920			2.8			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-Blast Pit (2)	8/1/2007	500-5681	1100	B		NS			NS			87	B		NS			15			NS			98			NS			18			NS		
JPL3-STOCKPILE-1(0)	8/2/2007	500-5719	270			NS			NS			260	B		NS			4.4			NS			61			NS			14			NS		
JPL3-STOCKPILE-2(0)	8/2/2007	500-5719	170			NS			NS			360	B		NS			7.9			NS			95			NS			18			NS		
JPM4-Sediment-8/2	8/2/2007	500-5720	17			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP21(0.5)	8/3/2007	500-5767	170000	B		480			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP22(2)	8/3/2007	500-5767	9100	B		270			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP23(0.5)	8/3/2007	500-5767	97	B		0.045	J	B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP24(2)	8/3/2007	500-5767	3900	B		22			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP25(0.5)	8/3/2007	500-5767	35	B		0.015	J	B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP26(2)	8/3/2007	500-5767	340	B		0.14		B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP27(0.5)	8/3/2007	500-5767	1100	B		4.5			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP28(2)	8/3/2007	500-5767	220	B		0.0066	J	B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP29(0.5)	8/3/2007	500-5767	1600	B		8.6			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP30(2)	8/3/2007	500-5767	99	B		1.5		B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP31(0.5)	8/3/2007	500-5767	8100	B		9.4			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP30(2)-D	8/3/2007	500-5767	100	B		0.075		B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-1(5)	8/10/2007	500-5933	19			NS			NS			80	B		NS			14			NS			NS			NS			NS			NS		
JPL5-PCN2-2(5)	8/10/2007	500-5933	13			NS			NS			57	B		NS			9.7			NS			NS			NS			NS			NS		
JPL5-PCN2-3(5)	8/10/2007	500-5933	15			NS			NS			67	B		NS			14			NS			NS			NS			NS			NS		
JPL5-PCN2-4(5)	8/10/2007	500-5933	14			NS			NS			67	B		NS			12			NS			NS			NS			NS			NS		
JPL5-PCN2-5(5)	8/10/2007	500-5933	16			NS			NS			80	B		NS			13			NS			NS			NS			NS			NS		
JPL5-PCN2-6(5)	8/10/2007	500-5933	16			NS			NS			73	B		NS			15			NS			NS			NS			NS			NS		
JPL5-PCN2-7(5)	8/10/2007	500-5933	15			NS			NS			82	B		NS			14			NS			NS			NS			NS			NS		
JPL5-PCN2-8(5)	8/10/2007	500-5933	15			NS			NS			83	B		NS			12			NS			NS			NS			NS			NS		
JPL5-PCN2-9(5)	8/10/2007	500-5933	12			NS			NS			62	B		NS			8.2			NS			NS			NS			NS			NS		
JPL5-PCN2-10(5)	8/10/2007	500-5933	14			NS			NS			72	B		NS			14			NS			NS			NS			NS			NS		
JPL5-PCN2-11(5)	8/13/2007	500-5954	15		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-12(5)	8/13/2007	500-5954	12		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-13(5)	8/13/2007	500-5954	14		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-14(5)	8/13/2007	500-5954	13		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-15(5)	8/13/2007	500-5954	12		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-16(5)	8/13/2007	500-5954	13		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-17(5)	8/13/2007	500-5954	13		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-18(5)	8/13/2007	500-5954	14		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-19(5)	8/13/2007	500-5954	13		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-20(5)	8/13/2007	500-5954	12		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-21(5)	8/13/2007	500-5954	15		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-22(5)	8/13/2007	500-5954	18		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-23(5)	8/13/2007	500-5954	15		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-24(5)	8/13/2007	500-5954	18		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-25(5)	8/13/2007	500-5954	16		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-26(5)	8/13/2007	500-5954	25		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-27(5)	8/13/2007	500-5954	18		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP26(2)	8/3/2007	500-5974	NS			0.57			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP28(2)	8/3/2007	500-5974	NS			0.032	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP32(0.5)	8/14/2007	500-5975	300	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP33(0.5)	8/14/2007	500-5975	12	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP34(0.5)	8/14/2007	500-5975	16	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

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 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 36 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM4-AF9(4)	7/31/2007	500-5658	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AF10(4)	7/31/2007	500-5658	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-Blast Pit (2)	8/1/2007	500-5681	710			NS			J			NS			NS			NS			NS			NS			NS			NS		
JPL3-STOCKPILE-1(0)	8/2/2007	500-5719	210			NS			1.9			NS			NS			NS			NS			NS			NS			NS		
JPL3-STOCKPILE-2(0)	8/2/2007	500-5719	130			NS			2			NS			NS			NS			NS			NS			NS			NS		
JPM4-Sediment-8/2	8/2/2007	500-5720	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP21(0.5)	8/3/2007	500-5767	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP22(2)	8/3/2007	500-5767	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP23(0.5)	8/3/2007	500-5767	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP24(2)	8/3/2007	500-5767	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP25(0.5)	8/3/2007	500-5767	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP26(2)	8/3/2007	500-5767	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP27(0.5)	8/3/2007	500-5767	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP28(2)	8/3/2007	500-5767	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP29(0.5)	8/3/2007	500-5767	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP30(2)	8/3/2007	500-5767	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP31(0.5)	8/3/2007	500-5767	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP30(2)-D	8/3/2007	500-5767	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-1(5)	8/10/2007	500-5933	39		B	NS			NS			NS			NS			NS			NS			NS			NS			2.2		
JPL5-PCN2-2(5)	8/10/2007	500-5933	26		B	NS			NS			NS			NS			NS			NS			NS			NS			1.4		
JPL5-PCN2-3(5)	8/10/2007	500-5933	27		B	NS			NS			NS			NS			NS			NS			NS			NS			2.8		
JPL5-PCN2-4(5)	8/10/2007	500-5933	28		B	NS			NS			NS			NS			NS			NS			NS			NS			2		
JPL5-PCN2-5(5)	8/10/2007	500-5933	32		B	NS			NS			NS			NS			NS			NS			NS			NS			2.3		
JPL5-PCN2-6(5)	8/10/2007	500-5933	28		B	NS			NS			NS			NS			NS			NS			NS			NS			3.1		
JPL5-PCN2-7(5)	8/10/2007	500-5933	31		B	NS			NS			NS			NS			NS			NS			NS			NS			2.8		
JPL5-PCN2-8(5)	8/10/2007	500-5933	31		B	NS			NS			NS			NS			NS			NS			NS			NS			2.5		
JPL5-PCN2-9(5)	8/10/2007	500-5933	26		B	NS			NS			NS			NS			NS			NS			NS			NS			2.4		
JPL5-PCN2-10(5)	8/10/2007	500-5933	27		B	NS			NS			NS			NS			NS			NS			NS			NS			2.3		
JPL5-PCN2-11(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-12(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-13(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-14(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-15(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-16(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-17(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-18(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-19(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-20(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-21(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-22(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-23(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-24(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-25(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-26(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-PCN2-27(5)	8/13/2007	500-5954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP26(2)	8/3/2007	500-5974	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP28(2)	8/3/2007	500-5974	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP32(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP33(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP34(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 37 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM4-AP35(0.5)	8/14/2007	500-5975	17	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP36(0.5)	8/14/2007	500-5975	17	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP37(0.5)	8/14/2007	500-5975	16	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP38(0.5)	8/14/2007	500-5975	18	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP39(0.5)	8/14/2007	500-5975	170	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP40(0.5)	8/14/2007	500-5975	23	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP41(0.5)	8/14/2007	500-5975	85	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP42(0.5)	8/14/2007	500-5975	220	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP43(0.5)	8/14/2007	500-5975	20			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP44(0.5)	8/14/2007	500-5975	24	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP45(0.5)	8/14/2007	500-5975	74	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP46(0.5)	8/14/2007	500-5975	17	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP47(0.5)	8/14/2007	500-5975	18	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP48(0.5)	8/14/2007	500-5975	65	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP49(0.5)	8/14/2007	500-5975	280	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP1(0.5)	8/15/2007	500-6015	35			0.037	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP37(0.5)	8/15/2007	500-6017	19			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP38(0.5)	8/15/2007	500-6017	29			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP39(0.5)	8/15/2007	500-6017	44			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP40(0.5)	8/15/2007	500-6017	57			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF22(2)	8/15/2007	500-6017	15			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF23(2)	8/15/2007	500-6017	14			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF24(4)	8/15/2007	500-6018	NS			NS			NS			NS			NS	41	J	NS			NS			NS			NS			NS			NS		
JPL5-AF25(4)	8/15/2007	500-6018	NS			NS			NS			NS			NS	17	J	NS			NS			NS			NS			NS			NS		
JPL5-AF26(4)	8/15/2007	500-6018	NS			NS			NS			NS			4.2	J	NS			NS			NS			NS			NS			NS			
JPM4-AP32(0.5)	8/14/2007	500-6053	NS			0.028	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP39(0.5)	8/14/2007	500-6053	NS			0.013	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP42(0.5)	8/14/2007	500-6053	NS			0.0059	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP49(0.5)	8/14/2007	500-6053	NS			0.015	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP41(0.5)	8/17/2007	500-6078	NS			NS			NS			NS			NS	11		NS			NS			NS			NS			NS			NS		
JPL2-SP17(1)	8/17/2007	500-6079	17			NS			NS			NS	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-SP18(1)	8/17/2007	500-6079	14			NS			NS			NS	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-SP19(1)	8/17/2007	500-6079	15			NS			NS			NS	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-SP20(1)	8/17/2007	500-6079	16			NS			NS			NS	B		NS			NS			NS			NS			NS			NS			NS		
JPL3-Topsoli	7/30/2007	500-6091	NS			0.013	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP50(0.5)	8/21/2007	500-6111	4800	B		12			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP51(0.5)	8/21/2007	500-6111	430	B		0.99			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP52(0.5)	8/21/2007	500-6111	66	B		0.1			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP53(0.5)	8/21/2007	500-6111	160	B		0.026	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP54(2)	8/21/2007	500-6111	320	B		0.063			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP55(0.5)	8/21/2007	500-6111	110000	B		14			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP56(2)	8/21/2007	500-6111	1700	B		2.4			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP57(0.5)	8/21/2007	500-6111	480	B		0.34			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP58(2)	8/21/2007	500-6111	23	B		0.01	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP59(0.5)	8/21/2007	500-6111	55	B		0.0055	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP137(0.5)	8/22/2007	500-6133	NS			NS			NS			NS	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-AP138(0.5)	8/22/2007	500-6133	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-SP4(1)	8/21/2007	500-6235	NS			NS			NS			NS			NS			NS			NS	0.05	U	NS			NS			NS			NS		
JPL5-AF27(5)	8/28/2007	500-6237	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP139(1)	8/28/2007	500-6238	21			NS			NS			NS	B		NS			NS			NS			NS			NS			NS			NS		

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 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
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 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 38 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM4-AP35(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP36(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP37(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP38(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP39(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP40(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP41(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP42(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP43(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP44(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP45(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP46(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP47(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP48(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP49(0.5)	8/14/2007	500-5975	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP1(0.5)	8/15/2007	500-6015	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP37(0.5)	8/15/2007	500-6017	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP38(0.5)	8/15/2007	500-6017	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP39(0.5)	8/15/2007	500-6017	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP40(0.5)	8/15/2007	500-6017	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF22(2)	8/15/2007	500-6017	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF23(2)	8/15/2007	500-6017	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF24(4)	8/15/2007	500-6018	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF25(4)	8/15/2007	500-6018	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF26(4)	8/15/2007	500-6018	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP32(0.5)	8/14/2007	500-6053	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP39(0.5)	8/14/2007	500-6053	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP42(0.5)	8/14/2007	500-6053	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP49(0.5)	8/14/2007	500-6053	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP41(0.5)	8/17/2007	500-6078	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-SP17(1)	8/17/2007	500-6079	16		B	NS			0.24	J	NS			NS			NS			NS			NS			NS			NS			
JPL2-SP18(1)	8/17/2007	500-6079	14		B	NS			0.18	J	NS			NS			NS			NS			NS			NS			NS			
JPL2-SP19(1)	8/17/2007	500-6079	28		B	NS			0.14	J	NS			NS			NS			NS			NS			NS			NS			
JPL2-SP20(1)	8/17/2007	500-6079	27		B	NS			0.16	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-Topsoil	7/30/2007	500-6091	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP50(0.5)	8/21/2007	500-6111	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP51(0.5)	8/21/2007	500-6111	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP52(0.5)	8/21/2007	500-6111	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP53(0.5)	8/21/2007	500-6111	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP54(2)	8/21/2007	500-6111	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP55(0.5)	8/21/2007	500-6111	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP56(2)	8/21/2007	500-6111	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP57(0.5)	8/21/2007	500-6111	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP58(2)	8/21/2007	500-6111	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-AP59(0.5)	8/21/2007	500-6111	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP137(0.5)	8/22/2007	500-6133	630		B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP138(0.5)	8/22/2007	500-6133	340		B	NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-SP4(1)	8/21/2007	500-6235	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF27(5)	8/28/2007	500-6237	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP139(1)	8/28/2007	500-6238	36		B	NS			0.45	J	NS			NS			NS			NS			NS			NS			NS			

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 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
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 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 39 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium			
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	
JPL2-AP140(8)	8/28/2007	500-6238	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL2-AP141(1)	8/28/2007	500-6238	12			NS			NS			40	B		NS			9.6			NS			NS			NS			NS			NS			
JPL2-AP142(8)	8/28/2007	500-6238	13			NS			NS			57	B		NS			10			NS			NS			NS			NS			NS			
JPL2-AP143(1)	8/28/2007	500-6238	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL2-AP144(8)	8/28/2007	500-6238	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL2-AP145(1)	8/28/2007	500-6238	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL2-AP146(8)	8/28/2007	500-6238	NS			NS			NS			NS			NS			7.9			NS			NS			NS			NS			NS			
JPL2-AF63(12)	8/28/2007	500-6238	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL2-AP147(0.5)	8/28/2007	500-6262	NS			NS			NS			72	B		NS			NS			NS			NS			NS			NS			NS			
JPL2-AP148(0.5)	8/28/2007	500-6262	NS			NS			NS			79	B		NS			NS			NS			NS			NS			NS			NS			
JPL5-SP1(1)	8/21/2007	500-6112	28			NS			NS			78	B		J	J	10			NS			NS			0.56			NS			NS				
JPL5-SP2(1)	8/21/2007	500-6112	29			NS			NS			130	B		0.75	J	J	9.3			NS			NS			0.44			NS			NS			
JPL5-SP3(1)	8/21/2007	500-6112	58			NS			NS			350	B		2.6	U	UJ	12			NS			NS			2.8			NS			NS			
JPL5-SP4(1)	8/21/2007	500-6112	41			NS			NS			130	B		0.96	J	J	20			NS			NS			1.6			NS			NS			
JPL5-SP5(1)	8/21/2007	500-6112	20			NS			NS			80	B		2.5	U	UJ	10			NS			NS			0.71			NS			NS			
JPL5-SP6(1)	8/21/2007	500-6112	22			NS			NS			67	B		2.3	U	UJ	13			NS			NS			0.57			NS			NS			
JPL5-AP42(0.5)	9/4/2007	500-6332	300			NS			NS			2000	B		3.3	J	J	17		J	NS			NS			11		J	NS			NS			
JPL5-AP43(0.5)	9/4/2007	500-6332	64			NS			NS			140	B	J	2	J	J	9.7		J	NS			NS			1.8		J	NS			NS			
JPL5-AP44(0.5)	9/4/2007	500-6332	4200			NS			NS			2000	B		1.3	J	J	12		J	NS			NS			5.5		J	NS			NS			
JPL5-AP45(0.5)	9/4/2007	500-6332	520			NS			NS			4300	B		6.3	J	J	79			NS			NS			30			NS			NS			
JPL5-AP46(0.5)	9/4/2007	500-6332	190			NS			NS			2000	B		1.4	J	J	9.8		J	NS			NS			3		J	NS			NS			
JPL5-AF28(2)	9/4/2007	500-6332	16		J	NS			NS			75	B		2.3	U	R	13		J	NS			NS			0.072		J	J	NS			NS		
JPL5-AF29(2)	9/4/2007	500-6332	140			NS			NS			180000	B		8.1		J	9.6		J	NS			NS			4.7		J	NS			NS			
JPL5-AP30(6)	9/5/2007	500-6356	NS			NS			NS			NS			NS			9.3			NS			NS			NS			NS			NS			
JPM4-AP60(0.5)	9/7/2007	500-6412	2600			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPM4-AP61(0.5)	9/7/2007	500-6412	50		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPM4-AP62(2)	9/7/2007	500-6412	34		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL5-AF31(3)	9/10/2007	500-6444	14		J	NS			NS			71	B	J	NS			14		J	NS			NS			NS			NS			NS			
JPL5-AP47(0.5)	9/10/2007	500-6444	120			NS			NS			490	B		NS			11		J	NS			NS			NS			NS			NS			
JPL5-AP48(0.5)	9/11/2007	500-6467	19			NS			NS			52	B		NS			8			NS			NS			NS			NS			NS			
JPL5-AP49(0.5)	9/11/2007	500-6467	24			NS			NS			110	B		NS			29			NS			NS			NS			NS			NS			
JPL5-AP50(0.5)	9/11/2007	500-6467	16			NS			NS			64	B		NS			NS			NS			NS			NS			NS			NS			
JPL5-AF32(4)	9/11/2007	500-6467	NS			NS			NS			230	B		NS			NS			NS			NS			NS			NS			NS			
JPL5-AP63(0.5)	9/12/2007	500-6503	890	B		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			
JPL3-AP1(0.5)	9/12/2007	500-6506	92	B		NS			NS			240	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP2(0.5)	9/12/2007	500-6506	39	B		NS			NS			210	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP3(0.5)	9/12/2007	500-6506	20	B		NS			NS			100	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP4(0.5)	9/12/2007	500-6506	22	B		NS			NS			76	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP5(0.5)	9/12/2007	500-6506	280	B		NS			NS			560	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP6(0.5)	9/12/2007	500-6506	41	B		NS			NS			87	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP7(0.5)	9/12/2007	500-6506	11	B		NS			NS			41	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP8(0.5)	9/12/2007	500-6506	56	B		NS			NS			94	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP9(0.5)	9/12/2007	500-6506	120	B		NS			NS			250	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP10(0.5)	9/12/2007	500-6506	1300	B		NS			NS			5400	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP11(0.5)	9/12/2007	500-6506	270	B		NS			NS			580	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF1(2)	9/12/2007	500-6506	43	B		NS			NS			120	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF2(2)	9/12/2007	500-6506	20	B		NS			NS			91	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF3(4)	9/12/2007	500-6506	13	B		NS			NS			44	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF4(4)	9/12/2007	500-6506	27	B		NS			NS			73	B		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF5(2)	9/12/2007	500-6506	21	B		NS			NS			55	B		NS			NS			NS			NS			NS			NS			NS			

B - blank contamination
LF - lab flag
J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL2-AP140(8)	8/28/2007	500-6238	NS			NS			0.24	J	NS			NS			NS			NS			NS			NS			NS			
JPL2-AP141(1)	8/28/2007	500-6238	18	B		NS			0.58	U	NS			NS			NS			NS			NS			NS			NS			
JPL2-AP142(8)	8/28/2007	500-6238	22	B		NS			0.21	J	NS			NS			NS			NS			NS			NS			NS			
JPL2-AP143(1)	8/28/2007	500-6238	22	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL2-AP144(8)	8/28/2007	500-6238	24	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL2-AP145(1)	8/28/2007	500-6238	27	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL2-AP146(8)	8/28/2007	500-6238	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL2-AF63(12)	8/28/2007	500-6238	NS			NS			0.21	J	NS			NS			NS			NS			NS			NS			NS			
JPL2-AP147(0.5)	8/28/2007	500-6262	29			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL2-AP148(0.5)	8/28/2007	500-6262	27			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL5-SP1(1)	8/21/2007	500-6112	22			NS			0.14	J	NS			NS			NS			NS			NS			NS			1.3	U		
JPL5-SP2(1)	8/21/2007	500-6112	18			NS			0.13	J	NS			NS			NS			NS			NS			NS			1.3	U		
JPL5-SP3(1)	8/21/2007	500-6112	74			NS			0.66	U	NS			NS			NS			NS			NS			NS			1.3	U		
JPL5-SP4(1)	8/21/2007	500-6112	33			NS			0.34	J	NS			NS			NS			NS			NS			NS			1.2	U		
JPL5-SP5(1)	8/21/2007	500-6112	26			NS			0.63	U	NS			NS			NS			NS			NS			NS			1.3	U		
JPL5-SP6(1)	8/21/2007	500-6112	27			NS			0.25	J	NS			NS			NS			NS			NS			NS			1.2	U		
JPL5-AP42(0.5)	9/4/2007	500-6332	1000	B		NS			1.3		NS			NS			NS			NS			NS			NS			1	U		
JPL5-AP43(0.5)	9/4/2007	500-6332	58	B		NS			0.18	J	NS			NS			NS			NS			NS			NS			0.9	U		
JPL5-AP44(0.5)	9/4/2007	500-6332	4600	B		NS			1.4		NS			NS			NS			NS			NS			NS			1	U		
JPL5-AP45(0.5)	9/4/2007	500-6332	5900	B		NS			5.5		NS			NS			NS			NS			NS			NS			1.1	U		
JPL5-AP46(0.5)	9/4/2007	500-6332	1900	B		NS			0.68		NS			NS			NS			NS			NS			NS			1.1	U		
JPL5-AF28(2)	9/4/2007	500-6332	26	B		NS			0.56	U	NS			NS			NS			NS			NS			NS			1.1	U		
JPL5-AF29(2)	9/4/2007	500-6332	370	B		NS			1.6		NS			NS			NS			NS			NS			NS			1.2	U		
JPL5-AP30(6)	9/5/2007	500-6356	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPM4-AP60(0.5)	9/7/2007	500-6412	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPM4-AP61(0.5)	9/7/2007	500-6412	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPM4-AP62(2)	9/7/2007	500-6412	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL5-AF31(3)	9/10/2007	500-6444	30		J	NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL5-AP47(0.5)	9/10/2007	500-6444	260			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL5-AP48(0.5)	9/11/2007	500-6467	17	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL5-AP49(0.5)	9/11/2007	500-6467	42	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL5-AP50(0.5)	9/11/2007	500-6467	25	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL5-AF32(4)	9/11/2007	500-6467	67	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL5-AP63(0.5)	9/12/2007	500-6503	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP1(0.5)	9/12/2007	500-6506	140			NS			7.9		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP2(0.5)	9/12/2007	500-6506	47			NS			1.9		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP3(0.5)	9/12/2007	500-6506	43			NS			0.21	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AP4(0.5)	9/12/2007	500-6506	36			NS			4		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP5(0.5)	9/12/2007	500-6506	430			NS			1.7		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP6(0.5)	9/12/2007	500-6506	45			NS			0.98		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP7(0.5)	9/12/2007	500-6506	20			NS			0.14		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP8(0.5)	9/12/2007	500-6506	60			NS			0.66		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP9(0.5)	9/12/2007	500-6506	120			NS			4.9		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP10(0.5)	9/12/2007	500-6506	1100			NS			66		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP11(0.5)	9/12/2007	500-6506	370			NS			5.5		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF1(2)	9/12/2007	500-6506	53			NS			2		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF2(2)	9/12/2007	500-6506	34			NS			0.23	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AF3(4)	9/12/2007	500-6506	19			NS			0.18	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AF4(4)	9/12/2007	500-6506	36			NS			1.3		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF5(2)	9/12/2007	500-6506	28			NS			0.34	J	NS			NS			NS			NS			NS			NS			NS			

B - blank contamination
LF - lab flag
J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium								
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF						
JPL3-AF6(2)	9/12/2007	500-6506	16	B		NS			NS			56	B		NS			NS			NS			NS			NS			NS			NS								
JPL5-AP51(0.5)	9/13/2007	500-6513	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS								
JPL5-AP52(0.5)	9/14/2007	500-6550	NS			NS			NS			NS			NS			8.9			NS			NS			NS			NS			NS								
JPL3-AP12(1)	9/17/2007	500-6592	190			NS			NS			710	B		NS			18	J	NS			430	J	NS		26	J	NS			26	J	NS							
JPL3-AP13(1)	9/17/2007	500-6592	190			NS			NS			2700	B		NS			16	J	NS			190	J	NS		25	J	NS			25	J	NS							
JPL3-AP14(1)	9/17/2007	500-6592	83			NS			NS			310	B		NS			16	J	NS			100	J	NS		18	J	NS			18	J	NS							
JPL3-AP15(1)	9/17/2007	500-6592	9300		J	NS			NS			590	B		NS			16	J	NS			160	J	NS		21	J	NS			21	J	NS							
JPL3-AP16(1)	9/17/2007	500-6592	61			NS			NS			260	B		NS			8.5	J	NS			180	J	NS		15	J	NS			15	J	NS							
JPL3-AP17(1)	9/17/2007	500-6592	900			NS			NS			1500	B		NS			16	J	NS			700	J	NS		44	J	NS			44	J	NS							
JPL3-AP18(1)	9/17/2007	500-6592	35		J	NS			NS			100	B	J	NS			9.7	J	NS			130	J	NS		16	J	NS			16	J	NS							
JPL3-AP19(1)	9/17/2007	500-6592	40		J	NS			NS			170	B	J	NS			14	J	NS			130	J	NS		25	J	NS			25	J	NS							
JPL3-AF7(1)	9/17/2007	500-6592	33		J	NS			NS			140	B	J	NS			15	J	NS			89	J	NS		22	J	NS			22	J	NS							
JPL3-AF8(1)	9/17/2007	500-6592	52			NS			NS			210	B		NS			12	J	NS			110	J	NS		19	J	NS			19	J	NS							
JPL3-AF9(1)	9/17/2007	500-6592	21		J	NS			NS			82	B	J	NS			14	J	NS			90	J	NS		14	J	NS			14	J	NS							
JPL3-AF10(1)	9/17/2007	500-6592	19		J	NS			NS			100		J	NS			15	J	NS			96	J	NS		22	J	NS			22	J	NS							
JPL3-AF11(1)	9/17/2007	500-6592	18		J	NS			NS			87		J	NS			16	J	NS			110	J	NS		22	J	NS			22	J	NS							
JPL3-AF12(1)	9/17/2007	500-6592	22		J	NS			NS			75	B	J	NS			11	J	NS			81	J	NS		15	J	NS			15	J	NS							
JPL3-AF13(1)	9/17/2007	500-6592	81			NS			NS			270	B		NS			16	J	NS			160	J	NS		62	J	NS			62	J	NS							
JPL3-AF14(1)	9/17/2007	500-6592	51			NS			NS			180	B	J	NS			11	J	NS			130	J	NS		16	J	NS			16	J	NS							
JPL3-AF15(2)	9/17/2007	500-6592	18			NS			NS			58	B	J	NS			6.3	J	NS			90	J	NS		15	J	NS			15	J	NS							
JPL3-AF16(2)	9/17/2007	500-6592	300			NS			NS			1700	B		NS			19	J	NS			510	J	NS		29	J	NS			29	J	NS							
White Substance	9/18/2007	500-6620	NS			NS			0.017	U		570	B		NS			0.4	J	NS			6.7		0.71		1					1		NS							
JPM4-POST-SB2	9/18/2007	500-6621	16			NS			NS			NS			NS			NS					NS		NS		NS						NS		NS						
JPM3-AF1(2)	9/18/2007	500-6622	18			NS			NS			NS			NS			NS					NS		NS		NS							NS		NS					
JPM3-AF6(2)	9/18/2007	500-6622	17			NS			NS			NS			NS			NS					NS		NS		NS								NS		NS				
JPM3-AF7(2)	9/18/2007	500-6622	18			NS			NS			NS			NS			NS					NS		NS		NS									NS		NS			
JPM3-AF8(2)	9/18/2007	500-6622	17			NS			NS			NS			NS			NS					NS		NS		NS									NS		NS			
JPM3-CR-AP1(0.5)	9/18/2007	500-6622	NS			NS			NS			NS			NS			NS					NS		NS		NS									NS		NS			
JPM3-CR-AP2(0.5)	9/18/2007	500-6622	NS			NS			NS			NS			NS			NS					NS		NS		NS										NS		NS		
JPM3-CR-AP3(0.5)	9/18/2007	500-6622	NS			NS			NS			NS			NS			NS					NS		NS		NS										NS		NS		
JPM3-CR-AP4(0.5)	9/18/2007	500-6622	NS			NS			NS			NS			NS			NS					NS		NS		NS										NS		NS		
JPM3-CR-AF1(2)	9/18/2007	500-6622	NS			NS			NS			NS			NS			NS					NS		NS		NS										NS		NS		
JPL3-AP24(0.5)	9/19/2007	500-6650	190			NS			NS			NS			NS			NS					NS		NS		NS										NS		NS		
JPL3-AP25(0.5)	9/19/2007	500-6650	35			NS			NS			NS			NS			NS					NS		NS		NS										NS		NS		
JPL3-AP26(0.5)	9/19/2007	500-6650	25			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AP27(0.5)	9/19/2007	500-6650	22			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AP28(0.5)	9/19/2007	500-6650	150			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AP29(0.5)	9/19/2007	500-6650	26			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AF21(1)	9/19/2007	500-6650	89			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AF22(1)	9/19/2007	500-6650	18			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AF23(1)	9/19/2007	500-6650	17			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AF24(1)	9/19/2007	500-6650	15			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AP20(0.5)	9/19/2007	500-6651	13			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AP21(0.5)	9/19/2007	500-6651	15			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AP22(0.5)	9/19/2007	500-6651	17			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AP23(0.5)	9/19/2007	500-6651	20			NS			NS			NS			NS			NS					NS		NS		NS												NS		NS
JPL3-AF17(1)	9/19/2007	500-6651	14			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AF18(1)	9/19/2007	500-6651	13			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AF19(1)	9/19/2007	500-6651	17			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	
JPL3-AF20(1)	9/19/2007	500-6651	14			NS			NS			NS			NS			NS					NS		NS		NS											NS		NS	

B - blank contamination
LF - lab flag
J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 42 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL3-AF6(2)	9/12/2007	500-6506	25			NS			0.17	J	NS			NS			NS			NS			NS			NS			NS			
JPL5-AP51(0.5)	9/13/2007	500-6513	52			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL5-AP52(0.5)	9/14/2007	500-6550	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP12(1)	9/17/2007	500-6592	260	B		NS			0.84		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP13(1)	9/17/2007	500-6592	250	B		NS			1		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP14(1)	9/17/2007	500-6592	120	B		NS			0.45	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AP15(1)	9/17/2007	500-6592	250	B		NS			1.8		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP16(1)	9/17/2007	500-6592	62	B	J	NS			0.27	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AP17(1)	9/17/2007	500-6592	3100	B		NS			2.8		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP18(1)	9/17/2007	500-6592	52	B	J	NS			0.17	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AP19(1)	9/17/2007	500-6592	62	B	J	NS			0.18	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AF7(1)	9/17/2007	500-6592	49	B	J	NS			0.16	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AF8(1)	9/17/2007	500-6592	72	B	J	NS			0.24	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AF9(1)	9/17/2007	500-6592	23	B	J	NS			0.53	U	NS			NS			NS			NS			NS			NS			NS			
JPL3-AF10(1)	9/17/2007	500-6592	34	B	J	NS			0.16	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AF11(1)	9/17/2007	500-6592	31	B	J	NS			0.56	U	NS			NS			NS			NS			NS			NS			NS			
JPL3-AF12(1)	9/17/2007	500-6592	24	B	J	NS			0.11	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AF13(1)	9/17/2007	500-6592	120	B		NS			0.52	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AF14(1)	9/17/2007	500-6592	74	B	J	NS			0.18	J	NS			NS			NS			NS			NS			NS			NS			
JPL3-AF15(2)	9/17/2007	500-6592	18	B	J	NS			0.6	U	NS			NS			NS			NS			NS			NS			NS			
JPL3-AF16(2)	9/17/2007	500-6592	450	B		NS			1.4		NS			NS			NS			NS			NS			NS			NS			
White Substance	9/18/2007	500-6620	1.5	B		0.94	U		0.47	U	2			160000	B		770			1000			430			160			0.94	U		
JPM4-POST-SB2	9/18/2007	500-6621	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPM3-AF1(2)	9/18/2007	500-6622	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPM3-AF6(2)	9/18/2007	500-6622	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPM3-AF7(2)	9/18/2007	500-6622	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPM3-AF8(2)	9/18/2007	500-6622	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPM3-CR-AP1(0.5)	9/18/2007	500-6622	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPM3-CR-AP2(0.5)	9/18/2007	500-6622	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPM3-CR-AP3(0.5)	9/18/2007	500-6622	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPM3-CR-AP4(0.5)	9/18/2007	500-6622	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPM3-CR-AF1(2)	9/18/2007	500-6622	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP24(0.5)	9/19/2007	500-6650	140	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP25(0.5)	9/19/2007	500-6650	40	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP26(0.5)	9/19/2007	500-6650	26	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP27(0.5)	9/19/2007	500-6650	29	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP28(0.5)	9/19/2007	500-6650	180	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP29(0.5)	9/19/2007	500-6650	39	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF21(1)	9/19/2007	500-6650	82	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF22(1)	9/19/2007	500-6650	22	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF23(1)	9/19/2007	500-6650	24	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF24(1)	9/19/2007	500-6650	21	B		NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP20(0.5)	9/19/2007	500-6651	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP21(0.5)	9/19/2007	500-6651	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP22(0.5)	9/19/2007	500-6651	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AP23(0.5)	9/19/2007	500-6651	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF17(1)	9/19/2007	500-6651	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF18(1)	9/19/2007	500-6651	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF19(1)	9/19/2007	500-6651	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			
JPL3-AF20(1)	9/19/2007	500-6651	NS			NS			NS		NS			NS			NS			NS			NS			NS			NS			

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
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 SDG - sample delivery group
 U - not detected
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Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 43 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM4-AP64(0.5)	9/20/2007	500-6687	18			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CONCRETE	9/21/2007	500-6713	9.5	B		NS			0.017	U		NS			NS			2.2	J		NS			35			1	U		9.4			NS		
JPL3-AP30(0.5)	9/21/2007	500-6714	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP31(0.5)	9/21/2007	500-6714	16			NS			NS			65	B		NS			NS			NS			NS			NS			NS			NS		
JPL3-AP33(0.5)	9/24/2007	500-6743	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP24(0.5)	9/19/2007	500-6750	NS			0.05	U		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP28(0.5)	9/19/2007	500-6750	NS			0.017	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AF13(1)	9/17/2007	500-6751	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			0.025	U	
JPL3-AP34(0.5)	9/27/2007	500-6812	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP35(0.5)	9/27/2007	500-6812	NS			NS			NS			76	B		NS			NS			NS			NS			NS			NS			NS		
JPL3-AP36(0.5)	9/27/2007	500-6812	26			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP37(0.5)	9/27/2007	500-6812	23			NS			NS			84	B		NS			NS			NS			110			NS			NS			NS		
JPL3-AF25(2)	9/27/2007	500-6812	19			NS			NS			82	B		NS			12			NS			92			NS			NS			NS		
JPL3-AF26(2)	9/27/2007	500-6812	27			NS			NS			100	B		NS			11			NS			110			NS			NS			NS		
JPL3-AF27(2)	9/27/2007	500-6812	NS			NS			NS			62	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-CP95(0.5)	10/2/2007	500-6900	260			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP96(0.5)	10/2/2007	500-6900	210			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP97(0.5)	10/2/2007	500-6900	160			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP98(0.5)	10/2/2007	500-6900	800			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP95(0.5)	10/2/2007	500-7025	NS			0.026	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP96(0.5)	10/2/2007	500-7025	NS			0.017	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP97(0.5)	10/2/2007	500-7025	NS			0.16			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-Demo Debris	10/8/2007	500-7026	0.46	J		NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-SP1(0.5)	10/9/2007	500-7047	42			NS			NS			120	B		NS			7.9			NS			160			NS			NS			NS		
JPL3-SP2(0.5)	10/9/2007	500-7047	39			NS			NS			110	B		NS			10			NS			120			NS			NS			NS		
JPL3-SP3(0.5)	10/9/2007	500-7047	29			NS			NS			87	B		NS			9.9			NS			110			NS			NS			NS		
JPL3-SP4(0.5)	10/9/2007	500-7047	170			NS			NS			400	B		NS			7.3			NS			160			NS			NS			NS		
JPL3-SP5(0.5)	10/9/2007	500-7047	180			NS			NS			430	B		NS			14			NS			160			NS			NS			NS		
JPL3-SP6(0.5)	10/9/2007	500-7047	270			NS			NS			630	B		NS			10			NS			340			NS			NS			NS		
JP-Borrowsource Clay	10/9/2007	500-7048	15			NS			0.03			NS			NS			8.2			NS			97			0.24			NS			NS		
JPM4 POST SB1 NN	10/12/2007	500-7145	19		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4 POST SB1 NE	10/12/2007	500-7145	20		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4 POST SB1 SN	10/12/2007	500-7145	19		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4 POST SB1 SE	10/12/2007	500-7145	35		J	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-SP4(0.5)	10/9/2007	500-7162	NS			0.042	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-SP5(0.5)	10/9/2007	500-7162	NS			0.096			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-SP6(0.5)	10/9/2007	500-7162	NS			0.048	J		NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL7-Fill Borrow Source	10/17/2007	500-7227	15			NS			0.016	J		NS			NS			13			NS			51			0.24			NS			NS		
JPL2-AP149(0.5)	10/31/2007	500-7513	40			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP150(0.5)	10/31/2007	500-7513	36			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP151(0.5)	10/31/2007	500-7513	56			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP152(0.5)	10/31/2007	500-7513	29			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF64(1)	10/31/2007	500-7513	14			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF65(1)	10/31/2007	500-7513	240			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF66(1)	10/31/2007	500-7513	15			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF65(1)	10/31/2007	500-7607	NS			0.072			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AP1(0.5)	10/1/2008	500-14347	19	B	J	NS			NS			62	B		2.1	U	JB	11			NS			NS			0.44			NS			NS		
JPL5-RS-AP2(0.5)	10/1/2008	500-14347	13	B	J	NS			NS			52	B		2	U	JB	8.3			NS			NS			0.43			NS			NS		
JPL5-RS-AP3(0.5)	10/1/2008	500-14347	14	B	J	NS			NS			54	B		0.6	JB	JB	9			NS			NS			0.47			NS			NS		
JPL5-RS-AP4(0.5)	10/1/2008	500-14347	14	B	J	NS			NS			56	B		2	U	JB	9.5			NS			NS			0.49			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 44 of 46)

Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM4-AP64(0.5)	9/20/2007	500-6687	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-CONCRETE	9/21/2007	500-6713	NS			5.1		U	2.5		U	NS			NS			NS			NS			NS			NS			NS		
JPL3-AP30(0.5)	9/21/2007	500-6714	180			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP31(0.5)	9/21/2007	500-6714	25			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP33(0.5)	9/24/2007	500-6743	19			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP24(0.5)	9/19/2007	500-6750	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP28(0.5)	9/19/2007	500-6750	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AF13(1)	9/17/2007	500-6751	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP34(0.5)	9/27/2007	500-6812	33			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP35(0.5)	9/27/2007	500-6812	26			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP36(0.5)	9/27/2007	500-6812	59			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AP37(0.5)	9/27/2007	500-6812	27			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AF25(2)	9/27/2007	500-6812	28			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AF26(2)	9/27/2007	500-6812	31			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-AF27(2)	9/27/2007	500-6812	17			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP95(0.5)	10/2/2007	500-6900	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP96(0.5)	10/2/2007	500-6900	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP97(0.5)	10/2/2007	500-6900	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP98(0.5)	10/2/2007	500-6900	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP95(0.5)	10/2/2007	500-7025	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP96(0.5)	10/2/2007	500-7025	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-CP97(0.5)	10/2/2007	500-7025	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-Demo Debris	10/8/2007	500-7026	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-SP1(0.5)	10/9/2007	500-7047	39	B		NS			0.41		J	NS			NS			NS			NS			NS			NS			NS		
JPL3-SP2(0.5)	10/9/2007	500-7047	33	B		NS			0.36		J	NS			NS			NS			NS			NS			NS			NS		
JPL3-SP3(0.5)	10/9/2007	500-7047	25	B		NS			0.18		J	NS			NS			NS			NS			NS			NS			NS		
JPL3-SP4(0.5)	10/9/2007	500-7047	150	B		NS			1.8			NS			NS			NS			NS			NS			NS			NS		
JPL3-SP5(0.5)	10/9/2007	500-7047	170	B		NS			2			NS			NS			NS			NS			NS			NS			NS		
JPL3-SP6(0.5)	10/9/2007	500-7047	280	B		NS			2			NS			NS			NS			NS			NS			NS			NS		
JP-Borrowsource Clay	10/9/2007	500-7048	NS			1.1		U	0.11		J	NS			NS			NS			NS			NS			NS			NS		
JPM4 POST SB1 NN	10/12/2007	500-7145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4 POST SB1 NE	10/12/2007	500-7145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4 POST SB1 SN	10/12/2007	500-7145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4 POST SB1 SE	10/12/2007	500-7145	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-SP4(0.5)	10/9/2007	500-7162	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-SP5(0.5)	10/9/2007	500-7162	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL3-SP6(0.5)	10/9/2007	500-7162	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL7-Fill Borrow Sourc	10/17/2007	500-7227	NS			1.1		U	0.13		J	NS			NS			NS			NS			NS			NS			NS		
JPL2-AP149(0.5)	10/31/2007	500-7513	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP150(0.5)	10/31/2007	500-7513	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP151(0.5)	10/31/2007	500-7513	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP152(0.5)	10/31/2007	500-7513	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF64(1)	10/31/2007	500-7513	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF65(1)	10/31/2007	500-7513	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF66(1)	10/31/2007	500-7513	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AF65(1)	10/31/2007	500-7607	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AP1(0.5)	10/1/2008	500-14347	27			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AP2(0.5)	10/1/2008	500-14347	22			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AP3(0.5)	10/1/2008	500-14347	24			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AP4(0.5)	10/1/2008	500-14347	25			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
LF - lab flag
J - estimated concentration
mg/kg - milligrams per kilogram
NS - not sampled
Res - result
SDG - sample delivery group
U - not detected
VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 45 of 46)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium			TCLP Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL5-RS-AP5(0.5)	10/1/2008	500-14347	15	B	J	NS			NS			56	B		0.49	JB	JB	9.4			NS			NS			0.59			17	B		NS		
JPL5-RS-AP6(0.5)	10/1/2008	500-14347	15	B	J	NS			NS			60	B		0.6	JB	JB	9.1			NS			NS			0.41			18	B		NS		
JPL5-RS-AP7(0.5)	10/1/2008	500-14347	14	B	J	NS			NS			54	B		1.9	U	JB	9.5			NS			NS			0.37			16	B		NS		
JPL5-RS-AP8(0.5)	10/1/2008	500-14347	13	B	J	NS			NS			56	B		2	U	JB	9.6			NS			NS			0.39			18	B		NS		
JPL5-RS-AP9(0.5)	10/1/2008	500-14347	13	B	J	NS			NS			60	B		2.3	U	JB	9.9			NS			NS			0.34			18	B		NS		
JPL5-RS-AP10(0.5)	10/1/2008	500-14347	14	B	J	NS			NS			56	B		2.1	U	JB	10			NS			NS			0.42			17	B		NS		
JPL5-RS-AP11(0.5)	10/1/2008	500-14347	19	B	J	NS			NS			78	B		2.1	U	JB	11			NS			NS			0.52			20	B		NS		
JPL5-RS-AP12(0.5)	10/1/2008	500-14347	16	B	J	NS			NS			68	B		0.42	JB	JB	10			NS			NS			0.43			18	B		NS		
JPL5-RS-AF1(6)	10/1/2008	500-14347	18	B		NS			NS			69	B		0.39	JB	JB	12			NS			NS			0.26			19	B		NS		
JPL5-RS-AF2(6)	10/1/2008	500-14347	24	B		NS			NS			76	B		2.3	U	JB	9.1			NS			NS			0.28			20	B		NS		
JPL5-RS-AF3(6)	10/1/2008	500-14347	14	B		NS			NS			59	B		0.94	JB	JB	9.3			NS			NS			0.31			19	B		NS		
JPL5-RS-AF4(6)	10/1/2008	500-14347	21	B		NS			NS			64	B		0.43	JB	JB	9.4			NS			NS			0.062	J		22	B		NS		
JPL5-RS-AF5(6)	10/1/2008	500-14347	16	B		NS			NS			64	B		2.4	U	JB	11			NS			NS			0.27			19	B		NS		
JPL5-RS-AF6(6)	10/1/2008	500-14347	14	B		NS			NS			84	B		2.2	U	JB	9.7			NS			NS			0.99			14	B		NS		
JPL5-RS-AF7(6)	10/1/2008	500-14347	17	B		NS			NS			67	B		0.57	JB	JB	8.1			NS			NS			0.21	J		22	B		NS		
JPL5-RS-AF8(6)	10/1/2008	500-14347	14	B		NS			NS			63	B		0.69	JB	JB	10			NS			NS			0.38			19	B		NS		
JPL5-RS-AF9(6)	10/1/2008	500-14347	62	B		NS			NS			190	B		2.2	U	JB	11			NS			NS			0.51			21	B		NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-7

Metals - Soil (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Identification	Date Sampled	SDG	Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL5-RS-AP5(0.5)	10/1/2008	500-14347	23			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AP6(0.5)	10/1/2008	500-14347	24			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AP7(0.5)	10/1/2008	500-14347	24			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AP8(0.5)	10/1/2008	500-14347	24			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AP9(0.5)	10/1/2008	500-14347	26			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AP10(0.5)	10/1/2008	500-14347	24			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AP11(0.5)	10/1/2008	500-14347	26			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AP12(0.5)	10/1/2008	500-14347	26			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AF1(6)	10/1/2008	500-14347	28			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AF2(6)	10/1/2008	500-14347	26			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AF3(6)	10/1/2008	500-14347	26			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AF4(6)	10/1/2008	500-14347	21			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AF5(6)	10/1/2008	500-14347	25			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AF6(6)	10/1/2008	500-14347	22			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AF7(6)	10/1/2008	500-14347	22			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AF8(6)	10/1/2008	500-14347	27			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-RS-AF9(6)	10/1/2008	500-14347	57			NS			NS			NS			NS			NS			NS			NS			NS			NS		

B - blank contamination
 LF - lab flag
 J - estimated concentration
 mg/kg - milligrams per kilogram
 NS - not sampled
 Res - result
 SDG - sample delivery group
 U - not detected
 VF - validation flag

Table C-8

Metals - Groundwater (mg/L)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 1 of 1)

Identification	Date Sampled	SDG	Lead			Barium			Cadmium			Chromium			Copper			Arsenic			Antimony			Silver			Zinc		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM3-ITF-TCLP(2)-1	7/11/2006	247603	880			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-TCLP(2)-2	7/11/2006	247603	1			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-TCLP(2)-3	7/11/2006	247603	0.25			NS			NS			NS			NS			NS			NS			NS			NS		
JPM12-PROFILE LAGOON	7/21/2006	247798	0.0036	B		NS			NS			NS			NS			NS			NS			NS			NS		
JPL23A-WATER	4/5/2007	250473	1.4			0.39			NS			0.083			NS			NS			0.18			NS			NS		
JPL2-Stormwater-US#5	7/19/2007	500-5427	0.005	U	UB	0.045			0.002	U		NS			0.0025	J		0.010	U		NS			0.0012	J		0.014	JB	B
JPL3-Stormwater-DS#5	7/19/2007	500-5427	0.0043	J	B	0.062			0.002	U		NS			0.0075	J		0.010	U		NS			0.005	U		0.024	B	B
JPM4-SB-1-RAW-8/2	8/2/2007	500-5718	0.031			NS			NS			NS			NS			NS			NS			NS			NS		
JPM4-STORMWATER-US#6	8/20/2007	500-6088	0.0035	J		NS			0.002	U		NS			0.0071	J		0.01	U		NS			0.005	U		0.014	J	
JPM4-STORMWATER-DS#6	8/20/2007	500-6088	0.011			NS			0.002	U		NS			0.0067	J		0.01	U		NS			0.005	U		0.036		
JPL3-Stormwater-US#6	8/20/2007	500-6089	0.014			0.056			NS			0.0024	J		0.014			0.01	U		NS			0.005	U		0.045		
JPL3-Stormwater-DS#6	8/20/2007	500-6089	0.11			0.24			NS			0.036			0.15			0.013			NS			0.0033	J		0.49		

B - blank contamination
 LF - lab flag
 mg/L - milligrams per liter
 NS - not sampled
 SDG - sample delivery group
 Res - result
 U - not detected
 VF - validation flag

APPENDIX D

QUALITY CONTROL SUMMARY TABLES

TABLE D-1

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Difference	Control Limits	Associated Analyte	Sample Results	Qualifier	Units
250253	Explosives	JPL2-AP37(0.5)	+33.7	15	4-AM-2,6-DNT	1500 J		ug/kg
			+58.9	15	2-AM-4,6-DNT	1400 J		ug/kg
			+56.8	15	2,6-DNT	1000 J		ug/kg
			+27.4	15	2,4-DNT	3700 J		ug/kg
250253	Explosives	JPL2-AF31(1)	+33.7	15	4-AM-2,6-DNT	500U none		ug/kg
			+58.9	15	2-AM-4,6-DNT	500U none		ug/kg
			+56.8	15	2,6-DNT	500U none		ug/kg
			+27.4	15	2,4-DNT	250U none		ug/kg
247836	PAHs	JPM3-ITF-AP16(1)	-23	20	Benzo (b) fluoranthene	38U J		ug/kg
247836	PAHs	JPM3-ITF-AP17(1)	+28	20	Benzo (k) fluoranthene	38U none		ug/kg
247836	PAHs	JPM3-ITF-AP18(1)	-23	20	Benzo (b) fluoranthene	38U J		ug/kg
247836	PAHs	JPM3-ITF-AP19(1)	+28	20	Benzo (k) fluoranthene	38U none		ug/kg
247836	PAHs	JPM3-ITF-AP21(1)	-23	20	Benzo (b) fluoranthene	320 J		ug/kg
247836	PAHs	JPM3-ITF-AP21(1)	+28	20	Benzo (k) fluoranthene	320 J		ug/kg
247836	PAHs	JPM3-ITF-AP21(1)	-23	20	Benzo (b) fluoranthene	75 J		ug/kg
247836	PAHs	JPM3-ITF-AP21(1)	+28	20	Benzo (k) fluoranthene	110 J		ug/kg
247836	PAHs	JPM3-ITF-AP21(1)	-23	20	Benzo (b) fluoranthene	180 J		ug/kg
247836	PAHs	JPM3-ITF-AP21(1)	+28	20	Benzo (k) fluoranthene	150 J		ug/kg
247836	PAHs	JPM3-ITF-AF36(3)	-23	20	Benzo (b) fluoranthene	41U J		ug/kg
247836	PAHs	JPM3-ITF-AF36(3)	+28	20	Benzo (k) fluoranthene	41U none		ug/kg
247836	PAHs	JPM3-ITF-AF37(3)	-23	20	Benzo (b) fluoranthene	37U J		ug/kg
247836	PAHs	JPM3-ITF-AF37(3)	+28	20	Benzo (k) fluoranthene	37U none		ug/kg
247836	PAHs	JPM3-ITF-AF38(2)	-23	20	Benzo (b) fluoranthene	37U J		ug/kg
247836	PAHs	JPM3-ITF-AF38(2)	+28	20	Benzo (k) fluoranthene	37U none		ug/kg
247836	PAHs	JPM3-ITF-AF39(2)	-23	20	Benzo (b) fluoranthene	28J J		ug/kg
247836	PAHs	JPM3-ITF-AF39(2)	+28	20	Benzo (k) fluoranthene	28J none		ug/kg
247836	PAHs	JPM3-ITF-AF40(2)	-23	20	Benzo (b) fluoranthene	38U J		ug/kg
247836	PAHs	JPM3-ITF-AF40(2)	+28	20	Benzo (k) fluoranthene	38U none		ug/kg
247836	PAHs	JPM3-ITF-AF41(2)	-23	20	Benzo (b) fluoranthene	39U J		ug/kg
247836	PAHs	JPM3-ITF-AF41(2)	+28	20	Benzo (k) fluoranthene	39U none		ug/kg
247836	PAHs	JPM3-ITF-AF42(2)	-23	20	Benzo (b) fluoranthene	39U J		ug/kg
247836	PAHs	JPM3-ITF-AF42(2)	+28	20	Benzo (k) fluoranthene	39U none		ug/kg
247836	PAHs	JPM3-ITF-AF43(2)	-23	20	Benzo (b) fluoranthene	40U J		ug/kg
247836	PAHs	JPM3-ITF-AF43(2)	+28	20	Benzo (k) fluoranthene	40U none		ug/kg
247836	PAHs	JPM3-ITF-AF44(2)	-23	20	Benzo (b) fluoranthene	84 J		ug/kg
247836	PAHs	JPM3-ITF-AF44(2)	+28	20	Benzo (k) fluoranthene	83 J		ug/kg

J - estimated concentration
PAH - polynuclear aromatic hydrocarbons
PCN - polychlorinated naphthalene
ug/kg - micrograms per kilogram
U - not detected
+ high bias
- low bias

TABLE D-1

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Difference	Control Limits	Associated Analyte	Sample Results	Qualifier	Units
248160	PAHs	JPM3-ITF-AF95(2)	+22	20	Benzo (k) fluoranthene	16J J		ug/kg
248160	PAHs	JPM3-ITF-AF96(2)	+22	20	Benzo (k) fluoranthene	40U none		ug/kg
248160	PAHs	JPM3-ITF-AF97(2)	+22	20	Benzo (k) fluoranthene	14J J		ug/kg
248160	PAHs	JPM3-ITF-AF98(2)	+22	20	Benzo (k) fluoranthene	38U none		ug/kg
248160	PAHs	JPM3-ITF-AF99(2)	+22	20	Benzo (k) fluoranthene	40U none		ug/kg
248160	PAHs	JPM3-ITF-AF101(2)	+22	20	Benzo (k) fluoranthene	41U none		ug/kg
248160	PAHs	JPM3-ITF-AF102(2)	+22	20	Benzo (k) fluoranthene	40U none		ug/kg
248190	PAHs	JPM3-ITF-AF110(2)	+25	20	Phenanthrene	38U none		ug/kg
			+22	20	Benzo (k) fluoranthene	38U none		ug/kg
			+24	20	Dibenzo (a,h) anthracene	38U none		ug/kg
248190	PAHs	JPM3-ITF-AF111(2)	+25	20	Phenanthrene	72 J		ug/kg
			+22	20	Benzo (k) fluoranthene	53 J		ug/kg
			+24	20	Dibenzo (a,h) anthracene	21 J		ug/kg
248190	PAHs	JPM3-ITF-AF113(2)	+25	20	Phenanthrene	17J J		ug/kg
			+22	20	Benzo (k) fluoranthene	39 J		ug/kg
			+24	20	Dibenzo (a,h) anthracene	37U none		ug/kg
248190	PAHs	JPM3-ITF-AF114(2)	+25	20	Phenanthrene	34J J		ug/kg
			+22	20	Benzo (k) fluoranthene	22J J		ug/kg
			+24	20	Dibenzo (a,h) anthracene	39U none		ug/kg
248190	PAHs	JPM3-ITF-AF115(2)	+25	20	Phenanthrene	110 J		ug/kg
			+22	20	Benzo (k) fluoranthene	74 J		ug/kg
			+24	20	Dibenzo (a,h) anthracene	36U none		ug/kg
248190	PAHs	JPM3-ITF-AF113(2)-D	+25	20	Phenanthrene	14J J		ug/kg
			+22	20	Benzo (k) fluoranthene	39 J		ug/kg
			+24	20	Dibenzo (a,h) anthracene	36U none		ug/kg
248208	PAHs	JPM3-ITF-AP50(1)	+23	20	Dibenzo (a,h) anthracene	36U none		ug/kg
248208	PAHs	JPM3-ITF-AP51(1)	+23	20	Dibenzo (a,h) anthracene	38J J		ug/kg

J - estimated concentration
PAH - polynuclear aromatic hydrocarbons
PCN - polychlorinated naphthalene
ug/kg - micrograms per kilogram
U - not detected
+ high bias
- low bias

TABLE D-1

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Difference	Control Limits	Associated Analyte	Sample Results	Qualifier	Units
248208	PAHs	JPM3-ITF-AP54(1)	+23	20	Dibenzo (a,h) anthracene	37U none		ug/kg
248208	PAHs	JPM3-ITF-AP55(1)	+23	20	Dibenzo (a,h) anthracene	380U none		ug/kg
248208	PAHs	JPM3-ITF-AP56(1)	+23	20	Dibenzo (a,h) anthracene	690U none		ug/kg
248208	PAHs	JPM3-ITF-AP55(1)-D	+23	20	Dibenzo (a,h) anthracene	390U none		ug/kg
248233	PAHs	JPM3-ITF-AF116(2)	+22	20	Benzo (b) fluoranthene	38U none		ug/kg
248233	PAHs	JPM3-ITF-AF117(2)	+22	20	Benzo (b) fluoranthene	36U none		ug/kg
248233	PAHs	JPM3-ITF-AF118(2)	+22	20	Benzo (b) fluoranthene	96 J		ug/kg
248233	PAHs	JPM3-ITF-AF119(2)	+22	20	Benzo (b) fluoranthene	71 J		ug/kg
248233	PAHs	JPM3-ITF-AF121(2)	+22	20	Benzo (b) fluoranthene	28J J		ug/kg
248233	PAHs	JPM3-ITF-AF122(2)	+22	20	Benzo (b) fluoranthene	45 J		ug/kg
248233	PAHs	JPM3-ITF-AF123(2)	+22	20	Benzo (b) fluoranthene	35U none		ug/kg
248233	PAHs	JPM3-ITF-AF124(2)	+22	20	Benzo (b) fluoranthene	86 J		ug/kg
248233	PAHs	JPM3-ITF-AP57(1)	+22	20	Benzo (b) fluoranthene	62 J		ug/kg
248233	PAHs	JPM3-ITF-AF119(2)-D	+22	20	Benzo (b) fluoranthene	74 J		ug/kg
248248	PAHs	JPM3-ITF-AP60(1)	+41	20	Benzo (b) fluoranthene	570 J		ug/kg
248248	PAHs	JPM3-ITF-AP61(1)	+41	20	Benzo (b) fluoranthene	380 J		ug/kg
248248	PAHs	JPM3-ITF-AP63(1)	+41	20	Benzo (b) fluoranthene	1300 J		ug/kg
248271	PAHs	JPM3-ITF-AF125(2)	+22	20	Benzo (b) fluoranthene	57 J		ug/kg
248271	PAHs	JPM3-ITF-AF126(2)	+22	20	Benzo (b) fluoranthene	98 J		ug/kg
248271	PAHs	JPM3-ITF-AF127(2)	+22	20	Benzo (b) fluoranthene	140 J		ug/kg
248271	PAHs	JPM3-ITF-AF128(2)	+22	20	Benzo (b) fluoranthene	14 J		ug/kg
248271	PAHs	JPM3-ITF-AF129(2)	+22	20	Benzo (b) fluoranthene	15 J		ug/kg
248271	PAHs	JPM3-ITF-AF130(2)	+22	20	Benzo (b) fluoranthene	38U none		ug/kg
248271	PAHs	JPM3-ITF-AF131(2)	+22	20	Benzo (b) fluoranthene	38U none		ug/kg
248271	PAHs	JPM3-ITF-AF132(2)	+22	20	Benzo (b) fluoranthene	40U none		ug/kg
248271	PAHs	JPM3-ITF-AF133(2)	+22	20	Benzo (b) fluoranthene	40U none		ug/kg
248271	PAHs	JPM3-ITF-AF130(2)-D	+22	20	Benzo (b) fluoranthene	38U none		ug/kg
248423	PAHs	JPM3-ITF-AF156(2)	+27	20	Fluorene	44U none		ug/kg
248423	PAHs	JPM3-ITF-AF157(2)	+27	20	Fluorene	40U none		ug/kg
248423	PAHs	JPM3-ITF-AF158(2)	+27	20	Fluorene	44U none		ug/kg
248423	PAHs	JPM3-ITF-AF159(2)	+27	20	Fluorene	42U none		ug/kg
248423	PAHs	JPM3-ITF-AF160(2)	+27	20	Fluorene	42U none		ug/kg

J - estimated concentration

PAH - polynuclear aromatic hydrocarbons

PCN - polychlorinated naphthalene

ug/kg - micrograms per kilogram

U - not detected

+ high bias

- low bias

TABLE D-1

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 4 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Difference	Control Limits	Associated Analyte	Sample Results	Qualifier	Units
248423	PAHs	JPM3-ITF-AF161(2)	+27	20	Fluorene	38U none		ug/kg
248423	PAHs	JPM3-ITF-AF162(2)	+27	20	Fluorene	120U none		ug/kg
248423	PAHs	JPM3-ITF-AF163(2)	+27	20	Fluorene	39U none		ug/kg
248423	PAHs	JPM3-ITF-AF164(2)	+27	20	Fluorene	44U none		ug/kg
248423	PAHs	JPM3-ITF-AF165(2)	+27	20	Fluorene	37U none		ug/kg
248423	PAHs	JPM3-ITF-AF166(2)	+27	20	Fluorene	40U none		ug/kg
248423	PAHs	JPM3-ITF-AF161(2)-D	+27	20	Fluorene	39U none		ug/kg
248439	PAHs	JPM3-ITF-AF167(2)	+27	20	Fluorene	39U none		ug/kg
248537	PAHs	JPM3-ITF-AP77(1)	+38	20	Benzo (k) fluoranthene	40U none		ug/kg
248537	PAHs	JPM3-ITF-AP78(1)	+38	20	Benzo (k) fluoranthene	42U none		ug/kg
248537	PAHs	JPM3-ITF-AF168(2)	+38	20	Benzo (k) fluoranthene	370U none		ug/kg
248926	PAHs	JPM3-ITF-AF171	-24	20	Benzo (k) fluoranthene	37J J		ug/kg
248926	PAHs	JPM3-ITF-AF173	-24	20	Benzo (k) fluoranthene	33J J		ug/kg
248926	PAHs	JPM3-ITF-AF175	-24	20	Benzo (k) fluoranthene	110 J		ug/kg
248926	PAHs	JPM3-ITF-AP80	-24	20	Benzo (k) fluoranthene	75 J		ug/kg
248926	PAHs	JPM3-ITF-AF169	-24	20	Benzo (k) fluoranthene	40U J		ug/kg
248926	PAHs	JPM3-ITF-AF170	-24	20	Benzo (k) fluoranthene	41U J		ug/kg
248926	PAHs	JPM3-ITF-AF172	-24	20	Benzo (k) fluoranthene	13J J		ug/kg
248926	PAHs	JPM3-ITF-AF176	-24	20	Benzo (k) fluoranthene	42U J		ug/kg
248926	PAHs	JPM3-ITF-AF177	-24	20	Benzo (k) fluoranthene	12J J		ug/kg
248926	PAHs	JPM3-ITF-AF178	-24	20	Benzo (k) fluoranthene	43U J		ug/kg
248926	PAHs	JPM3-ITF-AF179	-24	20	Benzo (k) fluoranthene	19J J		ug/kg
248981	PAHs	JPM3-ITF-AF180(2)	-22	20	Benzo (a) pyrene	16J J		ug/kg
			-25	20	Indeno (1,2,3-cd) pyrene	14J J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	45U J		ug/kg
248981	PAHs	JPM3-ITF-AF181(2)	-22	20	Benzo (a) pyrene	220 J		ug/kg
			-25	20	Indeno (1,2,3-cd) pyrene	140 J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	48 J		ug/kg
248981	PAHs	JPM3-ITF-AF182(2)	-22	20	Benzo (a) pyrene	44U J		ug/kg
			-25	20	Indeno (1,2,3-cd) pyrene	44U J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	44U J		ug/kg
248981	PAHs	JPM3-ITF-AF183(2)	-22	20	Benzo (a) pyrene	340 J		ug/kg

J - estimated concentration

PAH - polynuclear aromatic hydrocarbons

PCN - polychlorinated naphthalene

ug/kg - micrograms per kilogram

U - not detected

+ high bias

- low bias

TABLE D-1

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Parameter	Associated Sample Identification	% Difference	Control Limits	Associated Analyte	Sample Results	Qualifier	Units
248981	PAHs	JPM3-ITF-AF184(2)	-25	20	Indeno (1,2,3-cd) pyrene	240 J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	66 J		ug/kg
			-22	20	Benzo (a) pyrene	46U J		ug/kg
248981	PAHs	JPM3-ITF-AF185(2)	-25	20	Indeno (1,2,3-cd) pyrene	46U J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	46 J		ug/kg
			-22	20	Benzo (a) pyrene	19J J		ug/kg
248981	PAHs	JPM3-ITF-AF186(2)	-25	20	Indeno (1,2,3-cd) pyrene	14J J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	47U J		ug/kg
			-22	20	Benzo (a) pyrene	45U J		ug/kg
248981	PAHs	JPM3-ITF-AF187(2)	-25	20	Indeno (1,2,3-cd) pyrene	45U J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	45U J		ug/kg
			-22	20	Benzo (a) pyrene	44U J		ug/kg
248981	PAHs	JPM3-ITF-AF188(2)	-25	20	Indeno (1,2,3-cd) pyrene	44U J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	44U J		ug/kg
			-22	20	Benzo (a) pyrene	20J J		ug/kg
248981	PAHs	JPM3-ITF-AF189(2)	-25	20	Indeno (1,2,3-cd) pyrene	16J J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	41U J		ug/kg
			-22	20	Benzo (a) pyrene	11J J		ug/kg
248981	PAHs	JPM3-ITF-AF190(2)	-25	20	Indeno (1,2,3-cd) pyrene	44U J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	44U J		ug/kg
			-22	20	Benzo (a) pyrene	24J J		ug/kg
248981	PAHs	JPM3-ITF-AF191(2)	-25	20	Indeno (1,2,3-cd) pyrene	21J J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	46U J		ug/kg
			-22	20	Benzo (a) pyrene	48U J		ug/kg
248981	PAHs	JPM3-ITF-AP81(1)	-25	20	Indeno (1,2,3-cd) pyrene	48U J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	48U J		ug/kg
			-22	20	Benzo (a) pyrene	14J J		ug/kg
248981	PAHs	JPM3-ITF-AP82(1)	-25	20	Indeno (1,2,3-cd) pyrene	13J J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	46U J		ug/kg
			-22	20	Benzo (a) pyrene	670 J		ug/kg
			-25	20	Indeno (1,2,3-cd) pyrene	460 J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	130 J		ug/kg

J - estimated concentration
PAH - polynuclear aromatic hydrocarbons
PCN - polychlorinated naphthalene
ug/kg - micrograms per kilogram
U - not detected
+ high bias
- low bias

TABLE D-1

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 6 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Difference	Control Limits	Associated Analyte	Sample Results	Qualifier	Units
248981	PAHs	JPM3-ITF-AP83(1)	-22	20	Benzo (a) pyrene	83 J		ug/kg
			-25	20	Indeno (1,2,3-cd) pyrene	57 J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	13J J		ug/kg
248981	PAHs	JPM3-ITF-AF186(2)-D	-22	20	Benzo (a) pyrene	44U J		ug/kg
			-25	20	Indeno (1,2,3-cd) pyrene	44U J		ug/kg
			-27	20	Dibenzo (a,h) anthracene	44U J		ug/kg
249025	PAHs	JPM3-ITF-AF192(2)	+23	20	Benzo (k) fluoranthene	25J J		ug/kg
			+21	20	Benzo (a) pyrene	24J J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	10J J		ug/kg
249025	PAHs	JPM3-ITF-AF193(2)	+23	20	Benzo (k) fluoranthene	24J J		ug/kg
			+21	20	Benzo (a) pyrene	21J J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	11J J		ug/kg
249025	PAHs	JPM3-ITF-AF194(2)	+23	20	Benzo (k) fluoranthene	47 J		ug/kg
			+21	20	Benzo (a) pyrene	65 J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	21J J		ug/kg
249025	PAHs	JPM3-ITF-AF195(2)	+23	20	Benzo (k) fluoranthene	88 J		ug/kg
			+21	20	Benzo (a) pyrene	110 J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	27J J		ug/kg
249025	PAHs	JPM3-ITF-AF196(2)	+23	20	Benzo (k) fluoranthene	13J J		ug/kg
			+21	20	Benzo (a) pyrene	18J J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	12J J		ug/kg
249025	PAHs	JPM3-ITF-AF197(2)	+23	20	Benzo (k) fluoranthene	42U none		ug/kg
			+21	20	Benzo (a) pyrene	42U none		ug/kg
			+23	20	Dibenzo (a,h) anthracene	42U none		ug/kg
249025	PAHs	JPM3-ITF-AF198(2)	+23	20	Benzo (k) fluoranthene	23J J		ug/kg
			+21	20	Benzo (a) pyrene	41 J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	11J J		ug/kg
249025	PAHs	JPM3-ITF-AF199(2)	+23	20	Benzo (k) fluoranthene	41U none		ug/kg
			+21	20	Benzo (a) pyrene	41U none		ug/kg
			+23	20	Dibenzo (a,h) anthracene	41U none		ug/kg
249025	PAHs	JPM3-ITF-AF200(2)	+23	20	Benzo (k) fluoranthene	26J J		ug/kg
			+21	20	Benzo (a) pyrene	76 J		ug/kg

J - estimated concentration
PAH - polynuclear aromatic hydrocarbons
PCN - polychlorinated naphthalene
ug/kg - micrograms per kilogram
U - not detected
+ high bias
- low bias

TABLE D-1

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 7 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Difference	Control Limits	Associated Analyte	Sample Results	Qualifier	Units
249025	PAHs	JPM3-ITF-AF201(2)	+23	20	Dibenzo (a,h) anthracene	26J J		ug/kg
			+23	20	Benzo (k) fluoranthene	17J J		ug/kg
			+21	20	Benzo (a) pyrene	22J J		ug/kg
249025	PAHs	JPM3-ITF-AF202(2)	+23	20	Dibenzo (a,h) anthracene	9.4J J		ug/kg
			+23	20	Benzo (k) fluoranthene	42U none		ug/kg
			+21	20	Benzo (a) pyrene	42U none		ug/kg
249025	PAHs	JPM3-ITF-AP85(2)	+23	20	Dibenzo (a,h) anthracene	42U none		ug/kg
			+23	20	Benzo (k) fluoranthene	110 J		ug/kg
			+21	20	Benzo (a) pyrene	140 J		ug/kg
249025	PAHs	JPM3-ITF-AF195(2)-D	+23	20	Dibenzo (a,h) anthracene	47 J		ug/kg
			+23	20	Benzo (k) fluoranthene	44 J		ug/kg
			+21	20	Benzo (a) pyrene	58 J		ug/kg
249072	PAHs	JPM3-ITF-AF204(2)	+23	20	Dibenzo (a,h) anthracene	18J J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	40U none		ug/kg
			+23	20	Dibenzo (a,h) anthracene	11J J		ug/kg
249072	PAHs	JPM3-ITF-AF205(2)	+23	20	Dibenzo (a,h) anthracene	14J J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	31J J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	31J J		ug/kg
249072	PAHs	JPM3-ITF-AF206(2)	+23	20	Dibenzo (a,h) anthracene	14J J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	31J J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	31J J		ug/kg
249072	PAHs	JPM3-ITF-AF207(2)	+23	20	Dibenzo (a,h) anthracene	39U none		ug/kg
			+23	20	Dibenzo (a,h) anthracene	39U none		ug/kg
			+23	20	Dibenzo (a,h) anthracene	39U none		ug/kg
249072	PAHs	JPM3-ITF-AF208(2)	+23	20	Dibenzo (a,h) anthracene	84 J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	270 J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	270 J		ug/kg
249072	PAHs	JPM3-ITF-AF209(2)	+23	20	Dibenzo (a,h) anthracene	45U none		ug/kg
			+23	20	Dibenzo (a,h) anthracene	45U none		ug/kg
			+23	20	Dibenzo (a,h) anthracene	45U none		ug/kg
249072	PAHs	JPM3-ITF-AP86(1)	+23	20	Dibenzo (a,h) anthracene	20J J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	20J J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	20J J		ug/kg
249072	PAHs	JPM3-ITF-AP87(1)	+23	20	Dibenzo (a,h) anthracene	17J J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	17J J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	17J J		ug/kg
249072	PAHs	JPM3-ITF-AP88(1)	+23	20	Dibenzo (a,h) anthracene	180 J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	180 J		ug/kg
			+23	20	Dibenzo (a,h) anthracene	180 J		ug/kg
249072	PAHs	JPM3-ITF-AP89(1)	+23	20	Dibenzo (a,h) anthracene	37U none		ug/kg
			+23	20	Dibenzo (a,h) anthracene	37U none		ug/kg
			+23	20	Dibenzo (a,h) anthracene	37U none		ug/kg
249072	PAHs	JPM3-ITF-AF204(2)-D	+23	20	Dibenzo (a,h) anthracene	37U none		ug/kg
			+23	20	Dibenzo (a,h) anthracene	37U none		ug/kg
			+23	20	Dibenzo (a,h) anthracene	37U none		ug/kg
249563	PAHs	JPM12-AF4(2)	+36	20	Benzo (b) fluoranthene	45U none		ug/kg
			+36	20	Benzo (b) fluoranthene	45U none		ug/kg
			+36	20	Benzo (b) fluoranthene	45U none		ug/kg
250183	PAHs	JPM3-ITF-AF259(2)	+21	20	Benzo (k) fluoranthene	41U none		ug/kg
			+21	20	Benzo (k) fluoranthene	41U none		ug/kg
			+21	20	Benzo (k) fluoranthene	41U none		ug/kg
250183	PAHs	JPM3-ITF-AF260(2)	+21	20	Benzo (k) fluoranthene	18J J		ug/kg
			+21	20	Benzo (k) fluoranthene	18J J		ug/kg
			+21	20	Benzo (k) fluoranthene	18J J		ug/kg
250183	PAHs	JPM3-ITF-AP100(1)	+21	20	Benzo (k) fluoranthene	31J J		ug/kg
			+21	20	Benzo (k) fluoranthene	31J J		ug/kg
			+21	20	Benzo (k) fluoranthene	31J J		ug/kg
250183	PAHs	JPM3-ITF-A101(1)	+21	20	Benzo (k) fluoranthene	46U none		ug/kg
			+21	20	Benzo (k) fluoranthene	46U none		ug/kg
			+21	20	Benzo (k) fluoranthene	46U none		ug/kg
250183	PAHs	JPM3-ITF-A102(1)	+21	20	Benzo (k) fluoranthene	24J J		ug/kg
			+21	20	Benzo (k) fluoranthene	24J J		ug/kg
			+21	20	Benzo (k) fluoranthene	24J J		ug/kg
500-5265	PCN	JPL5-PCN-1(3)	-24	20	Heptachloronaphthalene	200 J		ug/kg

J - estimated concentration

PAH - polynuclear aromatic hydrocarbons

PCN - polychlorinated naphthalene

ug/kg - micrograms per kilogram

U - not detected

+ high bias

- low bias

TABLE D-1

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 8 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Difference	Control Limits	Associated Analyte	Sample Results	Qualifier	Units
500-5265	PCN	JPL5-PCN-2(3)	-24	20	Heptachloronaphthalene	36U J		ug/kg
500-5265	PCN	JPL5-PCN-3(3)	-24	20	Heptachloronaphthalene	39 J		ug/kg
500-5265	PCN	JPL5-PCN-4(3)	-24	20	Heptachloronaphthalene	25J J		ug/kg
500-5265	PCN	JPL5-PCN-5(3)	-24	20	Heptachloronaphthalene	33U J		ug/kg
500-5265	PCN	JPL5-PCN-6(3)	-24	20	Heptachloronaphthalene	34U J		ug/kg
500-5265	PCN	JPL5-PCN-7(3)	-24	20	Heptachloronaphthalene	8.8J J		ug/kg
500-5265	PCN	JPL5-PCN-8(3)	-24	20	Heptachloronaphthalene	34J J		ug/kg
500-5265	PCN	JPL5-PCN-9(3)	-24	20	Heptachloronaphthalene	130 J		ug/kg
500-5265	PCN	JPL5-PCN-10(3)	-24	20	Heptachloronaphthalene	330 J		ug/kg
500-5933	PCN	JPL5-PCN2-1(5)	+26	20	Hexachloronaphthalene	45U none		ug/kg
			+20	20	Heptachloronaphthalene	45U none		ug/kg
500-5933	PCN	JPL5-PCN2-2(5)	+26	20	Hexachloronaphthalene	43U none		ug/kg
			+20	20	Heptachloronaphthalene	43U none		ug/kg
500-5933	PCN	JPL5-PCN2-3(5)	+26	20	Hexachloronaphthalene	42U none		ug/kg
			+20	20	Heptachloronaphthalene	42U none		ug/kg
500-5933	PCN	JPL5-PCN2-4(5)	+26	20	Hexachloronaphthalene	43U none		ug/kg
			+20	20	Heptachloronaphthalene	43U none		ug/kg
500-5933	PCN	JPL5-PCN2-5(5)	+26	20	Hexachloronaphthalene	46U none		ug/kg
			+20	20	Heptachloronaphthalene	46U none		ug/kg
500-5933	PCN	JPL5-PCN2-6(5)	+26	20	Hexachloronaphthalene	44U none		ug/kg
			+20	20	Heptachloronaphthalene	44U none		ug/kg
500-5933	PCN	JPL5-PCN2-7(5)	+26	20	Hexachloronaphthalene	43U none		ug/kg
			+20	20	Heptachloronaphthalene	43U none		ug/kg
500-5933	PCN	JPL5-PCN2-8(5)	+26	20	Hexachloronaphthalene	46U none		ug/kg
			+20	20	Heptachloronaphthalene	46U none		ug/kg
500-5933	PCN	JPL5-PCN2-9(5)	+26	20	Hexachloronaphthalene	45U none		ug/kg
			+20	20	Heptachloronaphthalene	45U none		ug/kg
500-5933	PCN	JPL5-PCN2-10(5)	+26	20	Hexachloronaphthalene	46U none		ug/kg
			+20	20	Heptachloronaphthalene	46U none		ug/kg
500-5954	PCN	JPL5-PCN2-11(5)	+26	20	Hexachloronaphthalene	36U none		ug/kg
			+20	20	Heptachloronaphthalene	36U none		ug/kg
500-5954	PCN	JPL5-PCN2-12(5)	+26	20	Hexachloronaphthalene	35U none		ug/kg

J - estimated concentration

PAH - polynuclear aromatic hydrocarbons

PCN - polychlorinated naphthalene

ug/kg - micrograms per kilogram

U - not detected

+ high bias

- low bias

TABLE D-1

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 9 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Difference	Control Limits	Associated Analyte	Sample Results	Qualifier	Units
500-5954	PCN	JPL5-PCN2-13(5)	+20	20	Heptachloronaphthalene	35U none		ug/kg
			+26	20	Hexachloronaphthalene	36U none	ug/kg	
500-5954	PCN	JPL5-PCN2-14(5)	+20	20	Heptachloronaphthalene	36U none		ug/kg
			+26	20	Hexachloronaphthalene	36U none	ug/kg	
500-5954	PCN	JPL5-PCN2-15(5)	+20	20	Heptachloronaphthalene	36U none		ug/kg
			+26	20	Hexachloronaphthalene	35U none	ug/kg	
500-5954	PCN	JPL5-PCN2-16(5)	+20	20	Heptachloronaphthalene	35U none		ug/kg
			+26	20	Hexachloronaphthalene	36U none	ug/kg	
500-5954	PCN	JPL5-PCN2-17(5)	+20	20	Heptachloronaphthalene	36U none		ug/kg
			+26	20	Hexachloronaphthalene	35U none	ug/kg	
500-5954	PCN	JPL5-PCN2-18(5)	+20	20	Heptachloronaphthalene	35U none		ug/kg
			+26	20	Hexachloronaphthalene	35U none	ug/kg	
500-5954	PCN	JPL5-PCN2-19(5)	+20	20	Heptachloronaphthalene	35U none		ug/kg
			+26	20	Hexachloronaphthalene	36U none	ug/kg	
500-5954	PCN	JPL5-PCN2-20(5)	+20	20	Heptachloronaphthalene	36U none		ug/kg
			+26	20	Hexachloronaphthalene	36U none	ug/kg	
500-5954	PCN	JPL5-PCN2-21(5)	+20	20	Heptachloronaphthalene	36U none		ug/kg
			+26	20	Hexachloronaphthalene	37U none	ug/kg	
500-5954	PCN	JPL5-PCN2-22(5)	+20	20	Heptachloronaphthalene	37U none		ug/kg
			+26	20	Hexachloronaphthalene	36U none	ug/kg	
500-5954	PCN	JPL5-PCN2-23(5)	+20	20	Heptachloronaphthalene	36U none		ug/kg
			+26	20	Hexachloronaphthalene	38U none	ug/kg	
500-5954	PCN	JPL5-PCN2-24(5)	+20	20	Heptachloronaphthalene	38U none		ug/kg
			+26	20	Hexachloronaphthalene	36U none	ug/kg	
500-5954	PCN	JPL5-PCN2-25(5)	+20	20	Heptachloronaphthalene	36U none		ug/kg
			+26	20	Hexachloronaphthalene	36U none	ug/kg	
500-5954	PCN	JPL5-PCN2-26(5)	+20	20	Heptachloronaphthalene	36U none		ug/kg
			+26	20	Hexachloronaphthalene	36U none	ug/kg	
500-5954	PCN	JPL5-PCN2-27(5)	+20	20	Heptachloronaphthalene	36U none		ug/kg
			+26	20	Hexachloronaphthalene	36U none	ug/kg	
			+20	20	Heptachloronaphthalene	36U none		ug/kg

J - estimated concentration
PAH - polynuclear aromatic hydrocarbons
PCN - polychlorinated naphthalene
ug/kg - micrograms per kilogram
U - not detected
+ high bias
- low bias

TABLE D-2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Recovery	Control Limits	Associated Analyte	Sample Results Qualifier	Units
500-5718	Explosives	JPM4-SB-1-RAW-8/2	67	70-130	1,3-DNB	0.4U J	ug/L
			65	70-130	NB	0.4U J	ug/L
			66	70-130	3-NT	0.81U J	ug/L
			65	70-130	4-NT	0.81U J	ug/L
			69	70-130	Tetryl	0.81U J	ug/L
247532	PAHs	JPM3-ITF-CP21(0.5) JPM3-ITF-CP22(0.5) JPM3-ITF-CP23(0.5) JPM3-ITF-CP24(0.5) JPM3-ITF-CP25(0.5)	66	70-130	Anthracene	3700U J	ug/kg
			66	70-130	Anthracene	35U J	ug/kg
			66	70-130	Anthracene	100J J	ug/kg
			66	70-130	Anthracene	3100 J	ug/kg
			66	70-130	Anthracene	3300 J	ug/kg
247700	PAHs	JPM3-ITF-AF1	65	70-130	Benzo (b) fluoranthene	36U J	ug/kg
			68	70-130	Benzo (k) fluoranthene	36U J	ug/kg
			64	70-130	Benzo (a) pyrene	36U J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	22J J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	22J J	ug/kg
247700	PAHs	JPM3-ITF-AF2	65	70-130	Benzo (g,h,i) perylene	29J J	ug/kg
			65	70-130	Benzo (b) fluoranthene	38U J	ug/kg
			64	70-130	Benzo (k) fluoranthene	38U J	ug/kg
			65	70-130	Benzo (a) pyrene	38U J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	38U J	ug/kg
247700	PAHs	JPM3-ITF-AF3	65	70-130	Dibenzo (a,h) anthracene	38U J	ug/kg
			65	70-130	Benzo (g,h,i) perylene	38U J	ug/kg
			68	70-130	Benzo (b) fluoranthene	11J J	ug/kg
			64	70-130	Benzo (k) fluoranthene	41U J	ug/kg
			65	70-130	Benzo (a) pyrene	41U J	ug/kg
247700	PAHs	JPM3-ITF-AF4	65	70-130	Indeno (1,2,3-cd) pyrene	8.4J J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	41U J	ug/kg
			65	70-130	Benzo (g,h,i) perylene	41U J	ug/kg
			68	70-130	Benzo (b) fluoranthene	290 J	ug/kg
			64	70-130	Benzo (k) fluoranthene	88 J	ug/kg
247700	PAHs	JPM3-ITF-AF5	65	70-130	Benzo (a) pyrene	190 J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	140 J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	60 J	ug/kg
			65	70-130	Benzo (g,h,i) perylene	160 J	ug/kg
			65	70-130	Benzo (b) fluoranthene	240 J	ug/kg
247700	PAHs	JPM3-ITF-AF6	68	70-130	Benzo (k) fluoranthene	130J J	ug/kg
			64	70-130	Benzo (a) pyrene	160J J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	150J J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	190U J	ug/kg
			65	70-130	Benzo (g,h,i) perylene	180J J	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
% - percent

TABLE D-2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Recovery	Control Limits	Associated Analyte	Sample Results	Qualifier	Units
247700	PAHs	JPM3-ITF-AF7	64	70-130	Benzo (a) pyrene	7.9J	J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	8.6J	J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	38U	J	ug/kg
			65	70-130	Benzo (g,h,i) perylene	10J	J	ug/kg
			65	70-130	Benzo (b) fluoranthene	15J	J	ug/kg
			68	70-130	Benzo (k) fluoranthene	39U	J	ug/kg
			64	70-130	Benzo (a) pyrene	17J	J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	20J	J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	19J	J	ug/kg
			65	70-130	Benzo (g,h,i) perylene	21J	J	ug/kg
247700	PAHs	JPM3-ITF-AF8	65	70-130	Benzo (b) fluoranthene	23J	J	ug/kg
			68	70-130	Benzo (k) fluoranthene	15J	J	ug/kg
			64	70-130	Benzo (a) pyrene	16J	J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	21J	J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	40U	J	ug/kg
			65	70-130	Benzo (g,h,i) perylene	28J	J	ug/kg
			65	70-130	Benzo (b) fluoranthene	39U	J	ug/kg
			68	70-130	Benzo (k) fluoranthene	39U	J	ug/kg
			64	70-130	Benzo (a) pyrene	39U	J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	39U	J	ug/kg
247700	PAHs	JPM3-ITF-AF9	65	70-130	Dibenzo (a,h) anthracene	39U	J	ug/kg
			65	70-130	Benzo (g,h,i) perylene	39U	J	ug/kg
			65	70-130	Benzo (b) fluoranthene	42U	J	ug/kg
			68	70-130	Benzo (k) fluoranthene	42U	J	ug/kg
			64	70-130	Benzo (a) pyrene	42U	J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	42U	J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	42U	J	ug/kg
			65	70-130	Benzo (g,h,i) perylene	42U	J	ug/kg
			65	70-130	Benzo (b) fluoranthene	240	J	ug/kg
			68	70-130	Benzo (k) fluoranthene	120J	J	ug/kg
247700	PAHs	JPM3-ITF-AP1	64	70-130	Benzo (a) pyrene	170J	J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	170J	J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	200U	J	ug/kg
			65	70-130	Benzo (g,h,i) perylene	240	J	ug/kg
			65	70-130	Benzo (b) fluoranthene	170	J	ug/kg
			68	70-130	Benzo (k) fluoranthene	69	J	ug/kg
			64	70-130	Benzo (a) pyrene	120	J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	90	J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	28J	J	ug/kg
			65	70-130	Benzo (g,h,i) perylene	110	J	ug/kg
247700	PAHs	JPM3-ITF-AP2	65	70-130	Benzo (b) fluoranthene	29J	J	ug/kg
			68	70-130	Benzo (k) fluoranthene	19J	J	ug/kg
			64	70-130	Benzo (a) pyrene	20J	J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	20J	J	ug/kg
247700	PAHs	JPM3-ITF-AP3	65	70-130	Benzo (g,h,i) perylene	110	J	ug/kg
			65	70-130	Benzo (b) fluoranthene	29J	J	ug/kg
			68	70-130	Benzo (k) fluoranthene	19J	J	ug/kg
			64	70-130	Benzo (a) pyrene	20J	J	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
% - percent

TABLE D-2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Recovery	Control Limits	Associated Analyte	Sample Results Qualifier	Units
			65	70-130	Indeno (1,2,3-cd) pyrene	18J J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	34U J	ug/kg
247700	PAHs	JPM3-ITF-AP4	65	70-130	Benzo (g,h,i) perylene	23J J	ug/kg
			65	70-130	Benzo (b) fluoranthene	110 J	ug/kg
			68	70-130	Benzo (k) fluoranthene	36J J	ug/kg
			64	70-130	Benzo (a) pyrene	69 J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	50 J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	19J J	ug/kg
247700	PAHs	JPM3-ITF-AP5	65	70-130	Benzo (g,h,i) perylene	63 J	ug/kg
			65	70-130	Benzo (b) fluoranthene	42U J	ug/kg
			68	70-130	Benzo (k) fluoranthene	42U J	ug/kg
			64	70-130	Benzo (a) pyrene	42U J	ug/kg
			65	70-130	Indeno (1,2,3-cd) pyrene	42U J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	42U J	ug/kg
247884	PAHs	JPM3-ITF-AP23(1)	65	70-130	Benzo (g,h,i) perylene	42U J	ug/kg
			69	70-130	Fluoranthene	41U J	ug/kg
247884	PAHs	JPM3-ITF-AP24(1)	61	70-130	Benzo (k) fluoranthene	41U J	ug/kg
			69	70-130	Fluoranthene	39U J	ug/kg
247884	PAHs	JPM3-ITF-AP25(2)	61	70-130	Benzo (k) fluoranthene	39U J	ug/kg
			69	70-130	Fluoranthene	41U J	ug/kg
247884	PAHs	JPM3-ITF-AP26(2)	61	70-130	Benzo (k) fluoranthene	41U J	ug/kg
			69	70-130	Fluoranthene	41U J	ug/kg
247884	PAHs	JPM3-ITF-AP27(2)	61	70-130	Benzo (k) fluoranthene	41U J	ug/kg
			69	70-130	Fluoranthene	39U J	ug/kg
247884	PAHs	JPM3-ITF-AP28(2)	61	70-130	Benzo (k) fluoranthene	39U J	ug/kg
			69	70-130	Fluoranthene	38U J	ug/kg
247884	PAHs	JPM3-ITF-AP29(2)	61	70-130	Benzo (k) fluoranthene	38U J	ug/kg
			69	70-130	Fluoranthene	40U J	ug/kg
247884	PAHs	JPM3-ITF-AF46(2)	61	70-130	Benzo (k) fluoranthene	40U J	ug/kg
			69	70-130	Fluoranthene	42U J	ug/kg
247884	PAHs	JPM3-ITF-AF47(2)	61	70-130	Benzo (k) fluoranthene	42U J	ug/kg
			69	70-130	Fluoranthene	42U J	ug/kg
247884	PAHs	JPM3-ITF-AF48(2)	61	70-130	Benzo (k) fluoranthene	42U J	ug/kg
			69	70-130	Fluoranthene	41U J	ug/kg
247884	PAHs	JPM3-ITF-AF49(2)	61	70-130	Benzo (k) fluoranthene	41U J	ug/kg
			69	70-130	Fluoranthene	41U J	ug/kg
247884	PAHs	JPM3-ITF-AF51(2)	61	70-130	Benzo (k) fluoranthene	23J J	ug/kg
			69	70-130	Fluoranthene	39U J	ug/kg
247884	PAHs	JPM3-ITF-AF52(2)	61	70-130	Benzo (k) fluoranthene	39U J	ug/kg
			69	70-130	Fluoranthene	41U J	ug/kg
247884	PAHs	JPM3-ITF-AF53(2)	61	70-130	Benzo (k) fluoranthene	41U J	ug/kg
			69	70-130	Fluoranthene	41U J	ug/kg
			61	70-130	Benzo (k) fluoranthene	41U J	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
% - percent

TABLE D-2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 4 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Recovery	Control Limits	Associated Analyte	Sample Results Qualifier	Units			
247884	PAHs	JPM3-ITF-AF54(2)	69	70-130	Fluoranthene	89 J	ug/kg			
			61	70-130	Benzo (k) fluoranthene	100 J	ug/kg			
247884	PAHs	JPM3-ITF-AF55(2)	69	70-130	Fluoranthene	40U J	ug/kg			
			61	70-130	Benzo (k) fluoranthene	40U J	ug/kg			
247904	PAHs	JPM3-ITF-AF56(2)	66	70-130	Benzo (k) fluoranthene	44U J	ug/kg			
		JPM3-ITF-AF57(2)	66	70-130	Benzo (k) fluoranthene	43U J	ug/kg			
		JPM3-ITF-AF58(2)	66	70-130	Benzo (k) fluoranthene	42U J	ug/kg			
		JPM3-ITF-AF59(2)	66	70-130	Benzo (k) fluoranthene	39U J	ug/kg			
		JPM3-ITF-AF60(2)	66	70-130	Benzo (k) fluoranthene	43U J	ug/kg			
		JPM3-ITF-AF62(2)	66	70-130	Benzo (k) fluoranthene	42U J	ug/kg			
		JPM3-ITF-AF63(2)	66	70-130	Benzo (k) fluoranthene	44U J	ug/kg			
		JPM3-ITF-AF64(2)	66	70-130	Benzo (k) fluoranthene	44U J	ug/kg			
		JPM3-ITF-AF65(2)	66	70-130	Benzo (k) fluoranthene	41U J	ug/kg			
		JPM3-ITF-AF64(2)	66	70-130	Benzo (k) fluoranthene	39U J	ug/kg			
		JPM3-ITF-AP30(2)	66	70-130	Benzo (k) fluoranthene	44U J	ug/kg			
		JPM3-ITF-AP31(2)	66	70-130	Benzo (k) fluoranthene	46U J	ug/kg			
		JPM3-ITF-AF58(2)-D	66	70-130	Benzo (k) fluoranthene	42U J	ug/kg			
		JPM3-ITF-AF60(2)-D	66	70-130	Benzo (k) fluoranthene	44U J	ug/kg			
		247954	PAHs	JPM3-ITF-AF67(2)	66	70-130	Naphthalene	40U J	ug/kg	
69	70-130				Acenaphthylene	40U J	ug/kg			
66	70-130				Acenaphthene	40U J	ug/kg			
69	70-130				Fluorene	40U J	ug/kg			
65	70-130				Anthracene	40U J	ug/kg			
69	70-130				Fluoranthene	40U J	ug/kg			
69	70-130				Pyrene	40U J	ug/kg			
65	70-130				Chrysene	40U J	ug/kg			
53	70-130				Benzo (k) fluoranthene	40U J	ug/kg			
65	70-130				Benzo (a) pyrene	40U J	ug/kg			
68	70-130				Indeno (1,2,3-cd) pyrene	40U J	ug/kg			
65	70-130				Dibenzo (a,h) anthracene	40U J	ug/kg			
247954	PAHs				JPM3-ITF-AF68(2)	66	70-130	Naphthalene	38U J	ug/kg
						69	70-130	Acenaphthylene	38U J	ug/kg
						66	70-130	Acenaphthene	38U J	ug/kg
		69	70-130	Fluorene		38U J	ug/kg			
		65	70-130	Anthracene		38U J	ug/kg			
		69	70-130	Fluoranthene		30J J	ug/kg			
		69	70-130	Pyrene		23J J	ug/kg			
		65	70-130	Chrysene		15J J	ug/kg			
		53	70-130	Benzo (k) fluoranthene		16J J	ug/kg			
		65	70-130	Benzo (a) pyrene		16J J	ug/kg			
		68	70-130	Indeno (1,2,3-cd) pyrene		12J J	ug/kg			
		65	70-130	Dibenzo (a,h) anthracene		38U J	ug/kg			
247954	PAHs	JPM3-ITF-AF69(2)	66	70-130	Naphthalene	40U J	ug/kg			

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
% - percent

TABLE D-2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 5 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Recovery	Control Limits	Associated Analyte	Sample Results Qualifier	Units
			69	70-130	Acenaphthylene	40U J	ug/kg
			66	70-130	Acenaphthene	40U J	ug/kg
			69	70-130	Fluorene	40U J	ug/kg
			65	70-130	Anthracene	40U J	ug/kg
			69	70-130	Fluoranthene	40U J	ug/kg
			69	70-130	Pyrene	40U J	ug/kg
			65	70-130	Chrysene	40U J	ug/kg
			53	70-130	Benzo (k) fluoranthene	40U J	ug/kg
			65	70-130	Benzo (a) pyrene	40U J	ug/kg
			68	70-130	Indeno (1,2,3-cd) pyrene	40U J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	40U J	ug/kg
247954	PAHs	JPM3-ITF-AF70(2)	66	70-130	Naphthalene	41U J	ug/kg
			69	70-130	Acenaphthylene	41U J	ug/kg
			66	70-130	Acenaphthene	41U J	ug/kg
			69	70-130	Fluorene	41U J	ug/kg
			65	70-130	Anthracene	41U J	ug/kg
			69	70-130	Fluoranthene	41U J	ug/kg
			69	70-130	Pyrene	41U J	ug/kg
			65	70-130	Chrysene	41U J	ug/kg
			53	70-130	Benzo (k) fluoranthene	41U J	ug/kg
			65	70-130	Benzo (a) pyrene	41U J	ug/kg
			68	70-130	Indeno (1,2,3-cd) pyrene	41U J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	41U J	ug/kg
247954	PAHs	JPM3-ITF-AP32(1)	66	70-130	Naphthalene	41U J	ug/kg
			69	70-130	Acenaphthylene	41U J	ug/kg
			66	70-130	Acenaphthene	41U J	ug/kg
			69	70-130	Fluorene	41U J	ug/kg
			65	70-130	Anthracene	41U J	ug/kg
			69	70-130	Fluoranthene	10J J	ug/kg
			69	70-130	Pyrene	41U J	ug/kg
			65	70-130	Chrysene	12J J	ug/kg
			53	70-130	Benzo (k) fluoranthene	41U J	ug/kg
			65	70-130	Benzo (a) pyrene	41U J	ug/kg
			68	70-130	Indeno (1,2,3-cd) pyrene	41U J	ug/kg
			65	70-130	Dibenzo (a,h) anthracene	41U J	ug/kg
247954	PAHs	JPM3-ITF-AP33(1)	66	70-130	Naphthalene	41U J	ug/kg
			69	70-130	Acenaphthylene	41U J	ug/kg
			66	70-130	Acenaphthene	41U J	ug/kg
			69	70-130	Fluorene	41U J	ug/kg
			65	70-130	Anthracene	41U J	ug/kg
			69	70-130	Fluoranthene	57 J	ug/kg
			69	70-130	Pyrene	40J J	ug/kg
			65	70-130	Chrysene	42 J	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
% - percent

TABLE D-2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 6 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Recovery	Control Limits	Associated Analyte	Sample Results Qualifier	Units			
247954	PAHs	JPM3-ITF-AP34(1)	53	70-130	Benzo (k) fluoranthene	29J J	ug/kg			
			65	70-130	Benzo (a) pyrene	33J J	ug/kg			
			68	70-130	Indeno (1,2,3-cd) pyrene	25J J	ug/kg			
			65	70-130	Dibenzo (a,h) anthracene	11J J	ug/kg			
			66	70-130	Naphthalene	39U J	ug/kg			
			69	70-130	Acenaphthylene	39U J	ug/kg			
			66	70-130	Acenaphthene	39U J	ug/kg			
			69	70-130	Fluorene	39U J	ug/kg			
			65	70-130	Anthracene	18J J	ug/kg			
			69	70-130	Fluoranthene	150 J	ug/kg			
			69	70-130	Pyrene	120 J	ug/kg			
			65	70-130	Chrysene	76 J	ug/kg			
			53	70-130	Benzo (k) fluoranthene	64 J	ug/kg			
			65	70-130	Benzo (a) pyrene	72 J	ug/kg			
			68	70-130	Indeno (1,2,3-cd) pyrene	51 J	ug/kg			
247954	PAHs	JPM3-ITF-AP35(1)	65	70-130	Dibenzo (a,h) anthracene	22J J	ug/kg			
			66	70-130	Naphthalene	37U J	ug/kg			
			69	70-130	Acenaphthylene	37U J	ug/kg			
			66	70-130	Acenaphthene	37U J	ug/kg			
			69	70-130	Fluorene	37U J	ug/kg			
			65	70-130	Anthracene	16J J	ug/kg			
			69	70-130	Fluoranthene	160 J	ug/kg			
			69	70-130	Pyrene	150 J	ug/kg			
			65	70-130	Chrysene	92 J	ug/kg			
			53	70-130	Benzo (k) fluoranthene	82 J	ug/kg			
			65	70-130	Benzo (a) pyrene	100 J	ug/kg			
			68	70-130	Indeno (1,2,3-cd) pyrene	72 J	ug/kg			
			65	70-130	Dibenzo (a,h) anthracene	32 J	ug/kg			
			247954	PAHs	JPM3-ITF-AP34(1)-D	66	70-130	Naphthalene	37U J	ug/kg
						69	70-130	Acenaphthylene	37U J	ug/kg
66	70-130	Acenaphthene				37U J	ug/kg			
69	70-130	Fluorene				37U J	ug/kg			
65	70-130	Anthracene				37U J	ug/kg			
69	70-130	Fluoranthene				80 J	ug/kg			
69	70-130	Pyrene				90 J	ug/kg			
65	70-130	Chrysene				55 J	ug/kg			
53	70-130	Benzo (k) fluoranthene				65 J	ug/kg			
65	70-130	Benzo (a) pyrene				59 J	ug/kg			
68	70-130	Indeno (1,2,3-cd) pyrene				47 J	ug/kg			
65	70-130	Dibenzo (a,h) anthracene				22J J	ug/kg			
248327		JPM3-ITF-AF143(2)				61	70-130	Benzo (k) fluoranthene	58 J	ug/kg
		JPM3-ITF-AF144(2)				61	70-130	Benzo (k) fluoranthene	19J J	ug/kg
		JPM3-ITF-AF145(2)				61	70-130	Benzo (k) fluoranthene	57 J	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
% - percent

TABLE D-2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 7 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Recovery	Control Limits	Associated Analyte	Sample Results Qualifier	Units
248065	PAHs	JPM3-ITF-AF146(2)	61	70-130	Benzo (k) fluoranthene	13J J	ug/kg
		JPM3-ITF-AF147(2)	61	70-130	Benzo (k) fluoranthene	38U J	ug/kg
		JPM3-ITF-AF148(2)	61	70-130	Benzo (k) fluoranthene	40U J	ug/kg
		JPM3-ITF-AP71(1)	61	70-130	Benzo (k) fluoranthene	36U J	ug/kg
		JPM3-ITF-AP72(1)	61	70-130	Benzo (k) fluoranthene	39U J	ug/kg
		JPM3-ITF-AF145(2)-D	61	70-130	Benzo (k) fluoranthene	97 J	ug/kg
		JPM3-ITF-AF81(2)	67	70-130	Naphthalene	40U J	ug/kg
		JPM3-ITF-AF82(2)	67	70-130	Naphthalene	38U J	ug/kg
		JPM3-ITF-AF83(2)	67	70-130	Naphthalene	26J J	ug/kg
		JPM3-ITF-AF84(2)	67	70-130	Naphthalene	42U J	ug/kg
		JPM3-ITF-AP44(1)	67	70-130	Naphthalene	400U J	ug/kg
		JPM3-ITF-AF83(2)-D	67	70-130	Naphthalene	31J J	ug/kg
		JPM3-ITF-AP77(1)	69	70-130	Naphthalene	40U J	ug/kg
		JPM3-ITF-AP78(1)	69	70-130	Naphthalene	42U J	ug/kg
248537	PAHs	JPM3-ITF-AF168(2)	69	70-130	Naphthalene	370U J	ug/kg
		JPM3-ITF-AF171	69	70-130	Naphthalene	39U J	ug/kg
		JPM3-ITF-AF173	69	70-130	Naphthalene	40U J	ug/kg
248926	PAHs	JPM3-ITF-AF175	69	70-130	Naphthalene	40U J	ug/kg
		JPM3-ITF-AP80	69	70-130	Naphthalene	61 J	ug/kg
		JPM3-ITF-AF169	69	70-130	Naphthalene	40U J	ug/kg
		JPM3-ITF-AF170	69	70-130	Naphthalene	41U J	ug/kg
		JPM3-ITF-AF172	69	70-130	Naphthalene	39U J	ug/kg
		JPM3-ITF-AF176	69	70-130	Naphthalene	42U J	ug/kg
		JPM3-ITF-AF177	69	70-130	Naphthalene	8.7J J	ug/kg
		JPM3-ITF-AF178	69	70-130	Naphthalene	43U J	ug/kg
		JPM3-ITF-AF179	69	70-130	Naphthalene	41U J	ug/kg
		JPM3-ITF-AF192(2)	68	70-130	Naphthalene	42U J	ug/kg
249025	PAHs		63	70-130	Benzo (k) fluoranthene	25J J	ug/kg
			69	70-130	Dibenzo (a,h) anthracene	10J J	ug/kg
		JPM3-ITF-AF193(2)	68	70-130	Naphthalene	43U J	ug/kg
249025	PAHs		63	70-130	Benzo (k) fluoranthene	24J J	ug/kg
			69	70-130	Dibenzo (a,h) anthracene	11J J	ug/kg
		JPM3-ITF-AF194(2)	68	70-130	Naphthalene	13J J	ug/kg
249025	PAHs		63	70-130	Benzo (k) fluoranthene	47 J	ug/kg
			69	70-130	Dibenzo (a,h) anthracene	21J J	ug/kg
		JPM3-ITF-AF195(2)	68	70-130	Naphthalene	43U J	ug/kg
249025	PAHs		63	70-130	Benzo (k) fluoranthene	88 J	ug/kg
			69	70-130	Dibenzo (a,h) anthracene	27J J	ug/kg
		JPM3-ITF-AF196(2)	68	70-130	Naphthalene	42U J	ug/kg
249025	PAHs		63	70-130	Benzo (k) fluoranthene	13J J	ug/kg
			69	70-130	Dibenzo (a,h) anthracene	12J J	ug/kg
		JPM3-ITF-AF197(2)	68	70-130	Naphthalene	42U J	ug/kg
			63	70-130	Benzo (k) fluoranthene	42U J	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
% - percent

TABLE D-2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 8 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Recovery	Control Limits	Associated Analyte	Sample Results Qualifier	Units
249025	PAHs	JPM3-ITF-AF198(2)	69	70-130	Dibenzo (a,h) anthracene	42U J	ug/kg
			68	70-130	Naphthalene	40U J	ug/kg
			63	70-130	Benzo (k) fluoranthene	23J J	ug/kg
249025	PAHs	JPM3-ITF-AF199(2)	69	70-130	Dibenzo (a,h) anthracene	11J J	ug/kg
			68	70-130	Naphthalene	41U J	ug/kg
			63	70-130	Benzo (k) fluoranthene	41U J	ug/kg
249025	PAHs	JPM3-ITF-AF200(2)	69	70-130	Dibenzo (a,h) anthracene	41U J	ug/kg
			68	70-130	Naphthalene	44U J	ug/kg
			63	70-130	Benzo (k) fluoranthene	26J J	ug/kg
249025	PAHs	JPM3-ITF-AF201(2)	69	70-130	Dibenzo (a,h) anthracene	26J J	ug/kg
			68	70-130	Naphthalene	44U J	ug/kg
			63	70-130	Benzo (k) fluoranthene	17J J	ug/kg
249025	PAHs	JPM3-ITF-AF202(2)	69	70-130	Dibenzo (a,h) anthracene	9.4J J	ug/kg
			68	70-130	Naphthalene	42U J	ug/kg
			63	70-130	Benzo (k) fluoranthene	42U J	ug/kg
249025	PAHs	JPM3-ITF-AP85(2)	69	70-130	Dibenzo (a,h) anthracene	42U J	ug/kg
			68	70-130	Naphthalene	45U J	ug/kg
			63	70-130	Benzo (k) fluoranthene	110 J	ug/kg
249025	PAHs	JPM3-ITF-AF195(2)-D	69	70-130	Dibenzo (a,h) anthracene	47 J	ug/kg
			68	70-130	Naphthalene	42U J	ug/kg
			63	70-130	Benzo (k) fluoranthene	44 J	ug/kg
249072	PAHs	JPM3-ITF-AF204(2)	69	70-130	Dibenzo (a,h) anthracene	18J J	ug/kg
			68	70-130	Naphthalene	40U J	ug/kg
			66	70-130	Benzo (k) fluoranthene	12J J	ug/kg
249072	PAHs	JPM3-ITF-AF205(2)	69	70-130	Indeno (1,2,3-cd) pyrene	14J J	ug/kg
			66	70-130	Dibenzo (a,h) anthracene	40U J	ug/kg
			68	70-130	Naphthalene	38U J	ug/kg
249072	PAHs	JPM3-ITF-AF206(2)	66	70-130	Benzo (k) fluoranthene	42 J	ug/kg
			69	70-130	Indeno (1,2,3-cd) pyrene	42 J	ug/kg
			66	70-130	Dibenzo (a,h) anthracene	11J J	ug/kg
249072	PAHs	JPM3-ITF-AF207(2)	66	70-130	Naphthalene	37U J	ug/kg
			69	70-130	Benzo (k) fluoranthene	32J J	ug/kg
			66	70-130	Indeno (1,2,3-cd) pyrene	32J J	ug/kg
249072	PAHs	JPM3-ITF-AF208(2)	66	70-130	Dibenzo (a,h) anthracene	14J J	ug/kg
			68	70-130	Naphthalene	13J J	ug/kg
			66	70-130	Benzo (k) fluoranthene	66 J	ug/kg
249072	PAHs	JPM3-ITF-AF209(2)	69	70-130	Indeno (1,2,3-cd) pyrene	72 J	ug/kg
			66	70-130	Dibenzo (a,h) anthracene	31J J	ug/kg
			68	70-130	Naphthalene	39U J	ug/kg
249072	PAHs	JPM3-ITF-AF209(2)	66	70-130	Benzo (k) fluoranthene	39U J	ug/kg
			69	70-130	Indeno (1,2,3-cd) pyrene	39U J	ug/kg
			66	70-130	Dibenzo (a,h) anthracene	39U J	ug/kg
249072	PAHs	JPM3-ITF-AF209(2)	68	70-130	Naphthalene	10J J	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
% - percent

TABLE D-2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 9 of 9)

Laboratory SDG	Parameter	Associated Sample Identification	% Recovery	Control Limits	Associated Analyte	Sample Results	Qualifier	Units
			66	70-130	Benzo (k) fluoranthene	160	J	ug/kg
			69	70-130	Indeno (1,2,3-cd) pyrene	230	J	ug/kg
249072	PAHs	JPM3-ITF-AF211(2)	66	70-130	Dibenzo (a,h) anthracene	84	J	ug/kg
			68	70-130	Naphthalene	40U	J	ug/kg
			66	70-130	Benzo (k) fluoranthene	690	J	ug/kg
			69	70-130	Indeno (1,2,3-cd) pyrene	710	J	ug/kg
249072	PAHs	JPM3-ITF-AP86(1)	66	70-130	Dibenzo (a,h) anthracene	270	J	ug/kg
			68	70-130	Naphthalene	45U	J	ug/kg
			66	70-130	Benzo (k) fluoranthene	15J	J	ug/kg
			69	70-130	Indeno (1,2,3-cd) pyrene	12J	J	ug/kg
249072	PAHs	JPM3-ITF-AP87(1)	66	70-130	Dibenzo (a,h) anthracene	45U	J	ug/kg
			68	70-130	Naphthalene	40U	J	ug/kg
			66	70-130	Benzo (k) fluoranthene	74	J	ug/kg
			69	70-130	Indeno (1,2,3-cd) pyrene	77	J	ug/kg
249072	PAHs	JPM3-ITF-AP88(1)	66	70-130	Dibenzo (a,h) anthracene	20J	J	ug/kg
			68	70-130	Naphthalene	42U	J	ug/kg
			66	70-130	Benzo (k) fluoranthene	60	J	ug/kg
			69	70-130	Indeno (1,2,3-cd) pyrene	57	J	ug/kg
249072	PAHs	JPM3-ITF-AP89(1)	66	70-130	Dibenzo (a,h) anthracene	17J	J	ug/kg
			68	70-130	Naphthalene	51	J	ug/kg
			66	70-130	Benzo (k) fluoranthene	370	J	ug/kg
			69	70-130	Indeno (1,2,3-cd) pyrene	440	J	ug/kg
249072	PAHs	JPM3-ITF-AF204(2)-D	66	70-130	Dibenzo (a,h) anthracene	180	J	ug/kg
			68	70-130	Naphthalene	37U	J	ug/kg
			66	70-130	Benzo (k) fluoranthene	37U	J	ug/kg
			69	70-130	Indeno (1,2,3-cd) pyrene	37U	J	ug/kg
249563	PAHs	JPM12-AF4(2)	66	70-130	Dibenzo (a,h) anthracene	37U	J	ug/kg
			68	70-130	Benzo (b) fluoranthene	45U	J	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
% - percent

TABLE D-3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 4)

Laboratory SDG	Parameter	Sample Identification	Analyte	MS Recovery (percent)	MSD Recovery (percent)	RPD	Control Limits Recovery (percent)	Control Limit RPD	Sample Results	Qualifier	Units
249144	Explosives	JPM3-CP7-18	Nitrobenzene	209	219	5	50-150	30	250U	none	ug/kg
			2,6-Dinitrotoluene	151	121	22	50-150	30	250U	none	ug/kg
			4-Amino-2,6-dinitrotoluene	70	47	39	50-150	30	3500 J		ug/kg
			1,3,5-Trinitrobenzene	D	D	D	50-150	30	3700	none	ug/kg
			2,4,6-Trinitrotoluene	D	D	D	50-150	30	18000	none	ug/kg
249144	Explosives	JPM3-CP7-22	2,4,6-Trinitrotoluene	127	157	21	50-150	30	250U	none	ug/kg
			Tetryl	47	100	72	50-150	30	500U	J	ug/kg
			1,3,5-Trinitrobenzene	124	151	7	50-150	30	250U	none	ug/kg
249398	Explosives	JPM3ITFCP1-8(1)	2-Amino-4,6-dinitrotoluene	60	174	72	50-150	30	500U	J	ug/kg
			Tetryl	145	188	13	50-150	30	1800	J	ug/kg
			2-Amino-4,6-dinitrotoluene	158	155	2	50-150	30	490U	none	ug/kg
250253	Explosives	JPL2-AP36(0.5)	2,4,6-Trinitrotoluene	D	D	D	50-150	30	5000	none	ug/kg
250253	Explosives	JPL2-CP64(2)	4-Nitrotoluene	192	156	21	50-150	30	200U	none	ug/kg
250012	Explosives	JPL5-L4(1)	2,4,6-TNT	156	129	19	50-150	30	250U	none	ug/kg
250224	Explosives	JPM3-ITF-AF49B(1)	2-AM-4,6-DNT	25	33	28	50-150	30	930	J	ug/kg
250274	Explosives	JPL2-CP80(0.5)	HMX	D	D	D	50-150	30	60000	none	ug/kg
			RDX	D	D	D	50-150	30	1500000	none	ug/kg
			2,4,6-Trinitrotoluene	D	D	D	50-150	30	140000	none	ug/kg
			HMX	D	D	D	50-150	30	1100	none	ug/kg
			RDX	D	D	D	50-150	30	310000	none	ug/kg
250285	Explosives	JPL2-AP56(0.5)	2,4,6-Trinitrotoluene	D	D	D	50-150	30	11000	none	ug/kg
			HMX	D	D	D	50-150	30	310000	none	ug/kg
			RDX	D	D	D	50-150	30	11000	none	ug/kg
			2,4,6-Trinitrotoluene	D	D	D	50-150	30	5300	none	ug/kg
			1,3,5-Trinitrobenzene	D	D	D	50-150	30	8100	none	ug/kg
250293	Explosives	JPL2-AP70(0.5)	HMX	D	D	D	50-150	30	12000	none	ug/kg
			2,4,6-Trinitrotoluene	D	D	D	50-150	30	5100	J	ug/kg
			HMX	194	107	58	50-150	30	1500	J	ug/kg
250332	Explosives	JPL2-AP84(0.5)	RDX	-14	161	238	50-150	30	2400	none	ug/kg
250340	Explosives	JPL2-AP92(0.5)	1,3,5-TNB	D	D	D	50-150	30	250U	none	ug/kg
			NB	113	172	41	50-150	30	7300	none	ug/kg
			2,4,6-TNT	D	D	D	50-150	30	860	J	ug/kg
			2-AM-4,6-DNT	40	207	135	50-150	30	500U	none	ug/kg
			4-AM-2,6-DNT	110	150	31	50-150	30	59000	none	ug/kg
250378	Explosives	JPL2-AP94(0.5)	HMX	D	D	D	50-150	30	2300	none	ug/kg
			RDX	D	D	D	50-150	30	9100	none	ug/kg
			2,4,6-TNT	D	D	D	50-150	30	500U	none	ug/kg
250401	Explosives	JPL2-SP2(0)	2-AM-4,6-DNT	151	151	0	50-150	30	500U	none	ug/kg
250418	Explosives	JPL2-SP4(1)	HMX	160	163	2	50-150	30	500U	none	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
D - diluted out
RPD - relative percent difference

TABLE D-3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 4)

Laboratory SDG	Parameter	Sample Identification	Analyte	MS Recovery (percent)	MSD Recovery (percent)	RPD	Control Limits Recovery (percent)	Control Limit RPD	Sample Results	Qualifier	Units			
500-4599	Explosives	JPWR367-2W-7	HMX	51	131	87	50-150	30	2400	none	ug/kg			
			RDX	195	150	15	50-150	30	1200	J	ug/kg			
			1,3,5-TNB	271	144	61	50-150	30	250U	none	ug/kg			
			Nitrobenzene	150	374	86	50-150	30	250U	none	ug/kg			
500-4602	Explosives	JPWR368-2E-13	2,4,6-TNT	-2930	-4509	42	50-150	30	69000	none	ug/kg			
			2,4,6-TNT	19	68	27	50-150	30	1300	J	ug/kg			
500-4662	Explosives	JPWR370-1E-3	2,4,6-TNT	-1720	-1470	26	50-150	30	23000	none	ug/kg			
			2-AM-4,6-DNT	188	155	19	50-150	30	500U	none	ug/kg			
500-5719	Explosives	JPL3-STOCKPILE-1(0)	2,4,6-TNT	123	151	15	50-150	30	430	J	ug/kg			
500-6900	Explosives	JPL2-CP95(0.5)	HMX	23	-110	19	50-150	30	7100	J	ug/kg			
			RDX	23	22	0	50-150	30	3000	J	ug/kg			
			2,4,6-TNT	602	650	8	50-150	30	430	J	ug/kg			
			2,4,6-TNT	247	105	81	50-150	30	250U	none	ug/kg			
500-7047 247532	Explosives PAHs	JPL3-SP3(0.5) JPM3-ITF-CP7(0.5)	Acenaphthene	57	48	17	50-150	30	670	J	ug/kg			
			Phenanthrene	-115	-142	0	50-150	30	7400	J	ug/kg			
			Anthracene	61	48	24	50-150	30	1400	J	ug/kg			
			Fluoranthene	-120	-181	0	50-150	30	1200	J	ug/kg			
			Pyrene	-183	-214	0	50-150	30	1200	J	ug/kg			
			Benzo (a) anthracene	-21	-48	0	50-150	30	5700	J	ug/kg			
			Chrysene	-94	-83	0	50-150	30	7200	J	ug/kg			
			Benzo (b) fluoranthene	-124	-149	0	50-150	30	6900	J	ug/kg			
			Benzo (k) fluoranthene	25	15	50	50-150	30	2000	J	ug/kg			
			Benzo (a) pyrene	-48	-38	0	50-150	30	7000	J	ug/kg			
			Indeno (1,2,3-cd) pyrene	-33	-18	0	50-150	30	5600	J	ug/kg			
			Benzo (g,h,i) perylene	-44	-46	0	50-150	30	6800	J	ug/kg			
			247532	PAHs	JPM3-ITF-CP25(0.5)	Naphthalene	98	221	77	50-150	30	410	J	ug/kg
						Acenaphthene	94	204	74	50-150	30	860	J	ug/kg
						Fluorene	113	260	79	50-150	30	1100	J	ug/kg
						Phenanthrene	75	712	162	50-150	30	1400	J	ug/kg
						Anthracene	43	246	140	50-150	30	3300	J	ug/kg
						Fluoranthene	28	466	177	50-150	30	1900	J	ug/kg
						Pyrene	21	301	174	50-150	30	1300	J	ug/kg
						Benzo (a) anthracene	57	334	142	50-150	30	1200	J	ug/kg
Chrysene	74	255				110	50-150	30	1200	J	ug/kg			
Benzo (b) fluoranthene	-164	27				-279	50-150	30	1600	J	ug/kg			
Benzo (k) fluoranthene	-1052	-925	0	50-150	30	6900	J	ug/kg						

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
D - diluted out
RPD - relative percent difference

TABLE D-3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 4)

Laboratory SDG	Parameter	Sample Identification	Analyte	MS Recovery (percent)	MSD Recovery (percent)	RPD	Control Limits Recovery (percent)	Control Limit RPD	Sample Results	Qualifier	Units
			Benzo (a) pyrene	55	237	125	50-150	30	10000 J	J	ug/kg
			Indeno (1,2,3-cd) pyrene	86	291	109	50-150	30	7200 J	J	ug/kg
			Dibenzo (a,h) anthracene	31	132	124	50-150	30	2900 J	J	ug/kg
			Benzo (g,h,l) perylene	94	323	110	50-150	30	7900 J	J	ug/kg
247836	PAHs	JPM3-ITF-AP16(1)	Phenanthrene	119	77	43	50-150	30	36J	none	ug/kg
			Anthracene	123	77	46	50-150	30	38U	none	ug/kg
			Benzo (a) anthracene	78	46	52	50-150	30	38U	J	ug/kg
			Chrysene	93	135	37	50-150	30	38U	none	ug/kg
249025	PAHs	JPM3-ITF-AF192(2)	Naphthalene	46	51	10	50-150	30	42U	J	ug/kg
248439	PAHs	JPM3-ITF-AF-167(2)	Acenaphthene	134	89	40	50-150	30	39U	none	ug/kg
249439	PAHs	JPM3-ITF-AF236(2)	Fluorene	92	67	31	50-150	30	25J	none	ug/kg
			Fluoranthene	59	41	36	50-150	30	94U	J	ug/kg
249487	PAHs	JPM3-ITF-AF244(2)	Naphthalene	67	47	35	50-150	30	42U	J	ug/kg
			Acenaphthylene	73	52	34	50-150	30	42U	J	ug/kg
			Acenaphthene	73	51	35	50-150	30	42U	J	ug/kg
			Fluorene	69	56	21	50-150	30	42U	J	ug/kg
			Phenanthrene	91	62	38	50-150	30	42U	J	ug/kg
			Anthracene	78	53	38	50-150	30	42U	J	ug/kg
			Fluoranthene	87	56	43	50-150	30	42U	J	ug/kg
			Pyrene	85	58	38	50-150	30	42U	J	ug/kg
			Benzo (a) anthracene	84	56	40	50-150	30	42U	J	ug/kg
			Chrysene	98	68	36	50-150	30	42U	J	ug/kg
			Benzo (b) fluoranthene	85	57	39	50-150	30	42U	J	ug/kg
			Benzo (k) fluoranthene	88	57	43	50-150	30	42U	J	ug/kg
			Benzo (a) pyrene	84	56	40	50-150	30	42U	J	ug/kg
			Indeno (1,2,3-cd) pyrene	87	57	42	50-150	30	42U	J	ug/kg
			Dibenzo (a,h) anthracene	90	57	45	50-150	30	42U	J	ug/kg
			Benzo (g,h,l) perylene	90	58	43	50-150	30	42U	J	ug/kg
250165	PAHs	JPM3-ITF-AP255(2)	Naphthalene	74	40	24	50-150	30	44U	J	ug/kg
			Acenaphthylene	84	49	25	50-150	30	44U	J	ug/kg
			Benzo (a) anthracene	79	48	21	50-150	30	44U	J	ug/kg
			Benzo (b) fluoranthene	74	45	22	50-150	30	44U	J	ug/kg
			Benzo (k) fluoranthene	73	46	23	50-150	30	44U	J	ug/kg
			Benzo (a) pyrene	72	44	20	50-150	30	44U	J	ug/kg
			Indeno (1,2,3-cd) pyrene	75	43	17	50-150	30	44U	J	ug/kg
			Dibenzo (a,h) anthracene	72	41	18	50-150	30	44U	J	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
D - diluted out
RPD - relative percent difference

TABLE D-3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 4 of 4)

Laboratory SDG	Parameter	Sample Identification	Analyte	MS Recovery (percent)	MSD Recovery (percent)	RPD	Control Limits Recovery (percent)	Control Limit RPD	Sample Results	Qualifier	Units
500-4317	PAHs	JPL2-AST-TF2(4)	Benzo (g,h,l) perylene	79	44	19	50-150	30	44U	J	ug/kg
500-5265	PAHs	JPL5-PCN-3(3)	Benzo (k) fluoranthene	48	90	54	50-150	30	170	J	ug/kg
500-5285	PAHs	JPL5-PCN-13(3)	Tetrachloronaphthalene	-165	43	15	50-150	30	7600	J	ug/kg
248307	TPH	JPM3-ITF-AF133(2)	Tetrachloronaphthalene	-8970	-9520	7	50-150	30	62000	J	ug/kg
250224	TPH	JPM3-ITF-AF208B(1)	TPH-DRO	56	99	55	70-130	30	110	J	mg/kg
500-4427	TPH	JPL2-PF5(4)	TPH-DRO	76	54	34	70-130	30	11	J	mg/kg
500-4472	TPH	JPL2-TP4(1)	TPH-GRO	78	67	11	70-130	30	100	J	ug/kg
500-5501	TPH	JPL5-AP35(0.5)	TPH-GRO	71	69	3	70-130	30	ND	J	mg/kg
500-5501	TPH	JPL5-AP35(0.5)	TPH-GRO	67	67	0	70-130	30	ND	J	ug/kg
500-5501	TPH	JPL5-AF13(3)	TPH-GRO	69	68	1	70-130	30	ND	J	ug/kg
500-6112	TPH	JPL5-SP5(1)	TPH-DRO	60	63	3	70-130	30	27	J	mg/kg
500-6112	TPH	JPL5-SP1(1)	TPH-GRO	70	69	1	70-130	30	ND	J	ug/kg
500-6332	TPH	JPL5-AP44(0.5)	TPH-DRO	59	66	4	70-130	30	94	J	mg/kg
500-6332	TPH	JPL5-AP42(0.5)	TPH-GRO	74	65	13	70-130	30	ND	J	ug/kg
500-5499	TPH	JPL5-AP23(0.5)	TPH-DRO	14	6	7	70-130	30	85	J	mg/kg
500-5499	TPH	JPL5-AP18(0.5)	TPH-GRO	65	69	7	70-130	30	ND	J	ug/kg
500-5499	TPH	JPL5-AP23(0.5)	TPH-GRO	63	69	9	70-130	30	ND	J	ug/kg
500-5499	TPH	JPL5-AP27(0.5)	TPH-GRO	67	68	1	70-130	30	ND	J	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected
D - diluted out
RPD - relative percent difference

TABLE D-4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INTERNAL STANDARDS RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 1)

Laboratory SDG	Parameter	Sample Identification	Internal Standard	Surrogate Recovery	Lower Control Limits	Upper Control Limits	Associated Analytes	Sample Results	Qualifier	Units
247836	PAHs	JPM3-ITF-AP16(1)	Perylene-d12	189094	199516	798062	Indeno (1,2,3-cd) pyrene Dibenzo (a,h) anthracene Benzo (g,h,i) perylene	38U J 38U J 38U J		ug/kg ug/kg ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected

TABLE D-5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING SURROGATE RECOVERY RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 6)

Laboratory SDG	Parameter	Sample Identification	Surrogate	Surrogate Recovery (percent)	Control Limits (percent)	Associated Analytes	Sample Results	Qualifier	Units
247532	PAHs	JPM3-ITF-CP2(0.5)	Nitrobenzene-d5	42	50-150	Naphthalene	180U J		ug/kg
247532	PAHs	JPM3-ITF-CP8(0.5)	Nitrobenzene-d5	43	50-150	Naphthalene	180U J		ug/kg
247532	PAHs	JPM3-ITF-CP9(0.5)	Nitrobenzene-d5	49	50-150	Naphthalene	170U J		ug/kg
247532	PAHs	JPM3-ITF-CP11(0.5)	Nitrobenzene-d5	36	50-150	Naphthalene	190U J		ug/kg
247532	PAHs	JPM3-ITF-CP12(0.5)	Nitrobenzene-d5	47	50-150	Naphthalene	190U J		ug/kg
247532	PAHs	JPM3-ITF-CP13(0.5)	Nitrobenzene-d5	48	50-150	Naphthalene	100 J		ug/kg
247748	PAHs	JPM3-ITF-AF24(2)	2-Fluorobiphenyl	46	50-150	Acenaphthene	38U J		ug/kg
				46	50-150	Ancenaphthalene	38U J		ug/kg
				46	50-150	Fluorene	38U J		ug/kg
				46	50-150	Phenanthrene	38U J		ug/kg
				46	50-150	Anthracene	38U J		ug/kg
				46	50-150	Fluoranthene	13J J		ug/kg
				46	50-150	Pyrene	9.7J J		ug/kg
247836	PAHs	JPM3-ITF-AP19(1)	Nitrobenzene-d5	47	50-150	Naphthalene	39U J		ug/kg
247836	PAHs	JPM3-ITF-AF39(2)	Nitrobenzene-d5	25	50-150	Naphthalene	37U J		ug/kg
247811	PAHs	JPM3-ITF-AP14(1)	Nitrobenzene-d5	33	50-150	Naphthalene	39U J		ug/kg
247811	PAHs	JPM3-ITF-AF28(2)	Nitrobenzene-d5	14	50-150	Naphthalene	35U J		ug/kg
247954	PAHs	JPM3-ITF-AF70(2)	Nitrobenzene-d5	42	50-150	Naphthalene	41U J		ug/kg
248048	PAHs	JPM3-ITF-AP71(2)	Nitrobenzene-d5	48	50-150	Naphthalene	45U J		ug/kg
248048	PAHs	JPM3-ITF-AF72(2)	Nitrobenzene-d5	47	50-150	Naphthalene	46U J		ug/kg
248048	PAHs	JPM3-ITF-AF74(2)	Nitrobenzene-d5	49	50-150	Naphthalene	43U J		ug/kg
248048	PAHs	JPM3-ITF-AF75(2)	Nitrobenzene-d5	40	50-150	Naphthalene	10J J		ug/kg
248048	PAHs	JPM3-ITF-AF75(2)	2-Fluorobiphenyl	47	50-150	Acenaphthene	13J J		ug/kg
				47	50-150	Ancenaphthalene	57 J		ug/kg
				47	50-150	Fluorene	15J J		ug/kg
				47	50-150	Phenanthrene	65 J		ug/kg
				47	50-150	Anthracene	68 J		ug/kg
				47	50-150	Fluoranthene	150 J		ug/kg
				47	50-150	Pyrene	140 J		ug/kg
248048	PAHs	JPM3-ITF-AF76(2)	Nitrobenzene-d5	36	50-150	Naphthalene	43U J		ug/kg
248048	PAHs	JPM3-ITF-AF76(2)	2-Fluorobiphenyl	42	50-150	Acenaphthene	43U J		ug/kg
				42	50-150	Ancenaphthalene	43U J		ug/kg
				42	50-150	Fluorene	43U J		ug/kg
				42	50-150	Phenanthrene	43U J		ug/kg
				42	50-150	Anthracene	43U J		ug/kg
				42	50-150	Fluoranthene	43U J		ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected

TABLE D-5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING SURROGATE RECOVERY RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 6)

Laboratory SDG	Parameter	Sample Identification	Surrogate	Surrogate Recovery (percent)	Control Limits (percent)	Associated Analytes	Sample Results	Qualifier	Units
248048	PAHs	JPM3-ITF-AF77(2)	Nitrobenzene-d5	42	50-150	Pyrene	43U	J	ug/kg
248048	PAHs	JPM3-ITF-AF78(2)	Nitrobenzene-d5	47	50-150	Naphthalene	41U	J	ug/kg
248048	PAHs	JPM3-ITF-AF78(2)	Nitrobenzene-d5	44	50-150	Naphthalene	42U	J	ug/kg
248048	PAHs	JPM3-ITF-AF78(2)	2-Fluorobiphenyl	48	50-150	Acenaphthene	42U	J	ug/kg
				48	50-150	Ancenaphthylene	42U	J	ug/kg
				48	50-150	Fluorene	42U	J	ug/kg
				48	50-150	Phenanthrene	42U	J	ug/kg
				48	50-150	Anthracene	42U	J	ug/kg
				48	50-150	Fluoranthene	42U	J	ug/kg
				48	50-150	Pyrene	42U	J	ug/kg
248048	PAHs	JPM3-ITF-AF79(2)	Nitrobenzene-d5	41	50-150	Naphthalene	42U	J	ug/kg
248048	PAHs	JPM3-ITF-AF79(2)	2-Fluorobiphenyl	48	50-150	Acenaphthene	42U	J	ug/kg
				48	50-150	Ancenaphthylene	42U	J	ug/kg
				48	50-150	Fluorene	42U	J	ug/kg
				48	50-150	Phenanthrene	31J	J	ug/kg
				48	50-150	Anthracene	42U	J	ug/kg
				48	50-150	Fluoranthene	45	J	ug/kg
				48	50-150	Pyrene	40J	J	ug/kg
248048	PAHs	JPM3-ITF-AF80(2)	Nitrobenzene-d5	48	50-150	Naphthalene	45U	J	ug/kg
248048	PAHs	JPM3-ITF-AF72(2)-D	Nitrobenzene-d5	42	50-150	Naphthalene	45U	J	ug/kg
248048	PAHs	JPM3-ITF-AF72(2)-D	2-Fluorobiphenyl	41	50-150	Acenaphthene	45U	J	ug/kg
				41	50-150	Ancenaphthylene	45U	J	ug/kg
				41	50-150	Fluorene	45U	J	ug/kg
				41	50-150	Phenanthrene	45U	J	ug/kg
				41	50-150	Anthracene	45U	J	ug/kg
				41	50-150	Fluoranthene	45U	J	ug/kg
				41	50-150	Pyrene	45U	J	ug/kg
248048	PAHs	JPM3-ITF-AP38(1)-D	Nitrobenzene-d5	47	50-150	Naphthalene	43U	J	ug/kg
248208	PAHs	JPM3-ITF-AP56(1)	Nitrobenzene-d5	42	50-150	Naphthalene	690U	J	ug/kg
248208	PAHs	JPM3-ITF-AP55(1)-D	Nitrobenzene-d5	40	50-150	Naphthalene	390U	J	ug/kg
248271	PAHs	JPM3-ITF-AF125(2)	Nitrobenzene-d5	47	50-150	Naphthalene	39U	J	ug/kg
248537	PAHs	JPM3-ITF-AP78(1)	Nitrobenzene-d5	48	50-150	Naphthalene	42U	J	ug/kg
248926	PAHs	JPM3-ITF-AF171	Nitrobenzene-d5	40	50-150	Naphthalene	39U	J	ug/kg
248926	PAHs	JPM3-ITF-AF175	2-Fluorobiphenyl	48	50-150	Acenaphthene	12J	J	ug/kg
					50-150	Ancenaphthylene	38J	J	ug/kg
					50-150	Fluorene	12J	J	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected

TABLE D-5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING SURROGATE RECOVERY RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 6)

Laboratory SDG	Parameter	Sample Identification	Surrogate	Surrogate Recovery (percent)	Control Limits (percent)	Associated Analytes	Sample Results	Qualifier	Units
					50-150	Phenanthrene	150 J		ug/kg
					50-150	Anthracene	61 J		ug/kg
					50-150	Fluoranthene	370 J		ug/kg
					50-150	Pyrene	320 J		ug/kg
248926	PAHs	JPM3-ITF-AF169	Nitrobenzene-d5	43	50-150	Naphthalene	40U J		ug/kg
			2-Fluorobiphenyl	32	50-150	Acenaphthene	40U J		ug/kg
					50-150	Ancenaphthylene	40U J		ug/kg
					50-150	Fluorene	40U J		ug/kg
					50-150	Phenanthrene	40U J		ug/kg
					50-150	Anthracene	40U J		ug/kg
					50-150	Fluoranthene	13J J		ug/kg
					50-150	Pyrene	11J J		ug/kg
248926	PAHs	JPM3-ITF-AF172	Nitrobenzene-d5	45	50-150	Naphthalene	39U J		ug/kg
248926	PAHs	JPM3-ITF-AF176	2-Fluorobiphenyl	44	50-150	Acenaphthene	42U J		ug/kg
					50-150	Ancenaphthylene	42U J		ug/kg
					50-150	Fluorene	42U J		ug/kg
					50-150	Phenanthrene	42U J		ug/kg
					50-150	Anthracene	42U J		ug/kg
					50-150	Fluoranthene	42U J		ug/kg
					50-150	Pyrene	42U J		ug/kg
			Nitrobenzene-d5	43	50-150	Naphthalene	42U J		ug/kg
248926	PAHs	JPM3-ITF-AF178	2-Fluorobiphenyl	45	50-150	Acenaphthene	43U J		ug/kg
					50-150	Ancenaphthylene	43U J		ug/kg
					50-150	Fluorene	43U J		ug/kg
					50-150	Phenanthrene	43U J		ug/kg
					50-150	Anthracene	43U J		ug/kg
					50-150	Fluoranthene	8.7J J		ug/kg
					50-150	Pyrene	43U J		ug/kg
			Nitrobenzene-d5	42	50-150	Naphthalene	43U J		ug/kg
248981	PAHs	JPM3-ITF-AF185(2)	Nitrobenzene-d5	46	50-150	Naphthalene	47U J		ug/kg
248981	PAHs	JPM3-ITF-AF189(2)	Nitrobenzene-d5	49	50-150	Naphthalene	44U J		ug/kg
248981	PAHs	JPM3-ITF-AF190(2)	Nitrobenzene-d5	49	50-150	Naphthalene	46U J		ug/kg
248981	PAHs	JPM3-ITF-AF191(2)	Nitrobenzene-d5	46	50-150	Naphthalene	48U J		ug/kg
249025	PAHs	JPM3-ITF-AF192(2)	Nitrobenzene-d5	48	50-150	Naphthalene	42U J		ug/kg
249025	PAHs	JPM3-ITF-AF196(2)	Nitrobenzene-d5	47	50-150	Naphthalene	42U J		ug/kg
249025	PAHs	JPM3-ITF-AF200(2)	Nitrobenzene-d5	49	50-150	Naphthalene	44U J		ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected

TABLE D-5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING SURROGATE RECOVERY RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 4 of 6)

Laboratory SDG	Parameter	Sample Identification	Surrogate	Surrogate Recovery (percent)	Control Limits (percent)	Associated Analytes	Sample Results	Qualifier	Units
249025	PAHs	JPM3-ITF-AF201(2)	Nitrobenzene-d5	49	50-150	Naphthalene	44U J		ug/kg
249025	PAHs	JPM3-ITF-AF202(2)	Nitrobenzene-d5	29	50-150	Naphthalene	42U J		ug/kg
			2-Fluorobiphenyl	37	50-150	Acenaphthene	42U J		ug/kg
					50-150	Ancenaphthalene	42U J		ug/kg
					50-150	Fluorene	42U J		ug/kg
					50-150	Phenanthrene	42U J		ug/kg
					50-150	Anthracene	42U J		ug/kg
					50-150	Fluoranthene	10J J		ug/kg
					50-150	Pyrene	42U J		ug/kg
			Terphenyl-d14	46	50-150	Benzo (a) anthracene	42U J		ug/kg
					50-150	Chrysene	42U J		ug/kg
					50-150	Benzo (b) fluoranthene	13J J		ug/kg
					50-150	Benzo (k) fluoranthene	42U J		ug/kg
					50-150	Benzo (a) pyrene	42U J		ug/kg
					50-150	Indeno (1,2,3-cd) pyrene	42U J		ug/kg
					50-150	Dibenzo (a,h) anthracene	42U J		ug/kg
					50-150	Benzo (g,h,l) perylene	42U J		ug/kg
249025	PAHs	JPM3-ITF-AF195(2)-D	Nitrobenzene-d5	44	50-150	Naphthalene	42U J		ug/kg
249072	PAHs	JPM3-ITF-AP87(1)	Nitrobenzene-d5	45	50-150	Naphthalene	42U J		ug/kg
249072	PAHs	JPM3-ITF-AP89(1)	Nitrobenzene-d5	49	50-150	Naphthalene	51 J		ug/kg
249240	PAHs	JPM3-ITF-AF227(2)	Nitrobenzene-d5	49	50-150	Naphthalene	42U J		ug/kg
249944	PAHs	JPM3-ITF-AP98(1)	Nitrobenzene-d5	49	50-150	Naphthalene	46U J		ug/kg
249944	PAHs	JPM3-ITF-AP99(1)	Nitrobenzene-d5	49	50-150	Naphthalene	44U J		ug/kg
249944	PAHs	JPM3-ITF-AF249(3)	Nitrobenzene-d5	47	50-150	Naphthalene	44U J		ug/kg
249944	PAHs	JPM3-ITF-AF250(3)	Nitrobenzene-d5	41	50-150	Naphthalene	43U J		ug/kg
249944	PAHs	JPM3-ITF-AF251(3)	Nitrobenzene-d5	45	50-150	Naphthalene	41U J		ug/kg
249944	PAHs	JPM3-ITF-AF254(3)	Nitrobenzene-d5	48	50-150	Naphthalene	48U J		ug/kg
500-5933	PCN	JPL5-PCN2-6(5)	Terphenyl-d14	153	50-150	Monochloronaphthalene	44U none		ug/kg
						Dichloronaphthalene	44U none		ug/kg
						Trichloronaphthalene	44U none		ug/kg
						Tetrachloronaphthalene	44U none		ug/kg
						Pentachloronaphthalene	44U none		ug/kg
						Hexachloronaphthalene	44U none		ug/kg
						Heptachloronaphthalene	44U none		ug/kg
						Octachloronaphthalene	44U none		ug/kg
500-5933	PCN	JPL5-PCN2-8(5)	Terphenyl-d14	185	50-150	Monochloronaphthalene	46U none		ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected

TABLE D-5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING SURROGATE RECOVERY RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 5 of 6)

Laboratory SDG	Parameter	Sample Identification	Surrogate	Surrogate Recovery (percent)	Control Limits (percent)	Associated Analytes	Sample Results	Qualifier	Units
						Dichloronaphthalene	46U none		ug/kg
						Trichloronaphthalene	46U none		ug/kg
						Tetrachloronaphthalene	46U none		ug/kg
						Pentachloronaphthalene	46U none		ug/kg
						Hexachloronaphthalene	46U none		ug/kg
						Heptachloronaphthalene	46U none		ug/kg
						Octachloronaphthalene	46U none		ug/kg
500-5933	PCN	JPL5-PCN2-9(5)	Terphenyl-d14	167	50-150	Monochloronaphthalene	45U none		ug/kg
						Dichloronaphthalene	45U none		ug/kg
						Trichloronaphthalene	45U none		ug/kg
						Tetrachloronaphthalene	45U none		ug/kg
						Pentachloronaphthalene	45U none		ug/kg
						Hexachloronaphthalene	45U none		ug/kg
						Heptachloronaphthalene	45U none		ug/kg
						Octachloronaphthalene	45U none		ug/kg
500-5933	PCN	JPL5-PCN2-10(5)	Terphenyl-d14	163	50-150	Monochloronaphthalene	46U none		ug/kg
						Dichloronaphthalene	46U none		ug/kg
						Trichloronaphthalene	46U none		ug/kg
						Tetrachloronaphthalene	46U none		ug/kg
						Pentachloronaphthalene	46U none		ug/kg
						Hexachloronaphthalene	46U none		ug/kg
						Heptachloronaphthalene	46U none		ug/kg
						Octachloronaphthalene	46U none		ug/kg
250005	PCB	JPL5-J2(1)	TCX	160	50-150	Aroclor 1016	22 U none		ug/Kg
						Aroclor 1221	22 U none		ug/Kg
						Aroclor 1232	22 U none		ug/Kg
						Aroclor 1248	22 U none		ug/Kg
						Aroclor 1254	22 U none		ug/Kg
						Aroclor 1260	24 J		ug/Kg
500-4317	TPH-DRO	JPL2-AST-TP2(0.5)		193	50-150	DRO	450 J		mg/kg
500-4427	TPH-DRO	JPL2-PF6(6)		159	50-150	DRO	490 J		mg/kg
500-4472	TPH-DRO	JPL2-TF4(7)		221/153	50-150	DRO	900 J		mg/kg
500-5001	TPH-GRO	JPL5-AP36(0.5)		39/63	50-150	GRO	ND J		ug/kg
500-5001	TPH-GRO	JPL5-AF11(3)		49	50-150	GRO	ND J		ug/kg
500-5001	TPH-GRO	JPL5-AF12(3)		49	50-150	GRO	ND J		ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected

TABLE D-5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING SURROGATE RECOVERY RESULTS

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 6 of 6)

Laboratory SDG	Parameter	Sample Identification	Surrogate	Surrogate Recovery (percent)	Control Limits (percent)	Associated Analytes	Sample Results	Qualifier	Units
500-5001	TPH-GRO	JPL5-AF14(3)		48/64	50-150	GRO	ND	J	ug/kg
500-5499	TPH-GRO	JPL5-AP14(0.5)		64/43	50-150	GRO	ND	J	ug/kg
500-5499	TPH-GRO	JPL5-AP23(0.5)		64/46	50-150	GRO	ND	J	ug/kg
500-5499	TPH-GRO	JPL5-AP24(0.5)		68/47	50-150	GRO	ND	J	ug/kg
500-5499	TPH-GRO	JPL5-AP26(0.5)		68/47	50-150	GRO	ND	J	ug/kg
500-5499	TPH-GRO	JPL5-AP27(0.5)		67/48	50-150	GRO	ND	J	ug/kg
500-5499	TPH-GRO	JPL5-AP28(0.5)		63/44	50-150	GRO	ND	J	ug/kg
500-5499	TPH-GRO	JPL5-AP29(0.5)		66/45	50-150	GRO	ND	J	ug/kg
500-5499	TPH-GRO	JPL5-AP30(0.5)		68/49	50-150	GRO	ND	J	ug/kg
500-5499	TPH-GRO	JPL5-AP31(0.5)		63/39	50-150	GRO	ND	J	ug/kg
500-5499	TPH-GRO	JPL5-AP32(0.5)		59/34	50-150	GRO	ND	J	ug/kg
500-5499	TPH-GRO	JPL5-AP33(0.5)		62/40	50-150	GRO	ND	J	ug/kg

J - estimated concentration
ug/kg - micrograms per kilogram
SDG - sample delivery group
U - not detected

TABLE D-6

Precision Results for Sample Duplicate Analysis - Polynuclear Aromatic Hydrocarbons (ug/kg)

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 2)

			Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenzo(a,h)anthracene	Benzo(ghi)perylene
JPM3-ITF-AP70(1)	8/23/2006	248301	8.5 J	8.1 J	89	86	1000	230	1700	1300	660	820	1000	320	670	460	150	530
JPM3-ITF-AP70(1)-D	8/23/2006	248301	39 U	39 U	28 J	28 J	450	91	790	590	280	380	410	190	290	190	63	220
			128	131	104	102	76	87	73	75	81	73	84	51	79	83	82	83
JPM3-ITF-AF145(2)	8/24/2006	248327	39 U	39 U	39 U	39 U	37 J	17 J	130	110	71	100	110	57	73	48	22 J	61
JPM3-ITF-AF145(2)-D	8/24/2006	248327	38 U	38 U	9 J	7.9 J	86	29 J	200	180	92	130	130	97	100	81	38 U	90
			3	3	125	133	80	52	42	48	26	26	17	52	31	51	53	38
JPM3-ITF-AF153(2)	8/28/2006	248379	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U
JPM3-ITF-AF153(2)-D	8/28/2006	248379	43 U	43 U	43 U	43 U	43 U	43 U	43 U	43 U	43 U	43 U	43 U	43 U	43 U	43 U	43 U	43 U
			5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
JPM3-ITF-AF161(2)	8/30/2006	248423	45	38 U	38 U	38 U	130	18 J	120	81	42	49	65	19 J	30 J	18 J	38 U	20 J
JPM3-ITF-AF161(2)-D	8/30/2006	248423	39 U	39 U	39 U	39 U	17 J	8.9 J	38 J	35 J	23 J	35 J	54	21 J	26 J	20 J	39 U	23 J
			14	3	3	3	154	68	104	79	58	33	18	10	14	11	3	14
JPM3-ITF-AF186(2)	10/3/2006	248981	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U
JPM3-ITF-AF186(2)-D	10/3/2006	248981	44 U	44 U	44 U	44 U	44 U	44 U	44 U	44 U	44 U	44 U	44 U	44 U	44 U	44 U	44 U	44 U
			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
JPM3-ITF-AF195(2)	10/5/2006	249025	43 U	43 U	43 U	43 U	36 J	12 J	110	100	86	96	160	88	110	80	27 J	100
JPM3-ITF-AF195(2)-D	10/5/2006	249025	42 U	42 U	42 U	42 U	24 J	11 J	63	58	43	60	93	44	58	43	18 J	53
			2	2	2	2	40	9	54	53	67	46	53	67	62	60	40	61
JPM3-ITF-AF204(2)	10/9/2006	249072	40 U	40 U	40 U	40 U	40 U	40 U	15 J	22 J	13 J	14 J	18 J	12 J	13 J	14 J	40 U	15 J
JPM3-ITF-AF204(2)-D	10/9/2006	249072	37 U	37 U	37 U	37 U	37 U	37 U	13 J	12 J	8.6 J	10 J	14 J	37 U	10 J	37 U	37 U	37 U
			8	8	8	8	8	8	14	59	41	33	25	102	26	90	8	85
JPM3-ITF-AF221(2)	10/17/2006	249177	44 U	44 U	44 U	44 U	44 U	44 U	10 J	44 U	44 U	44 U	44 U	44 U	44 U	44 U	44 U	44 U
JPM3-ITF-AF221(2)-D	10/17/2006	249177	43 U	43 U	43 U	43 U	43 U	43 U	23 J	17 J	16 J	18 J	22 J	24 J	19 J	18 J	43 U	43 U
			2	2	2	2	2	2	79	89	93	84	67	59	79	32	125	2
JPM3-ITF-AF244(2)	11/8/2006	249487	42 U	42 U	42 U	42 U	42 U	42 U	12 J	42 U	42 U	42 U	42 U	42 U	42 U	42 U	42 U	42 U
JPM3-ITF-AF244(2)-D	11/8/2006	249487	42 U	42 U	42 U	42 U	42 U	42 U	9.6 J	42 U	42 U	42 U	42 U	42 U	42 U	42 U	42 U	42 U
			0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0

Res - Result
 LF - Lab Flag
 VF - Validation Flag
 U - not detected
 J - estimated concentration
 SDG - sample delivery group

TABLE D-7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES (METALS)

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 12)

Laboratory SDG	Associated Sample ID	% Recovery	Control Limits	Associated Analyte	Sample		Units
					Results	Qualifier	
248301	JPM3-ITF-AF140(2)	17	75-125	Lead	94.67	none	mg/kg
248048	JPM3-ITF-AF75(2)	-138	75-125	Lead	12.52	none	mg/kg
248048	JPM3-ITF-AF75(2)	46	75-125	Zinc	62.59	J	mg/kg
249144	JPM3-CP7-16	10616	75-125	Lead	1600	none	mg/kg
249144	JPM3-CP7-17	10616	75-125	Lead	350	none	mg/kg
249144	JPM3-CP7-18	10616	75-125	Lead	420	none	mg/kg
249144	JPM3-CP7-19	10616	75-125	Lead	4500	none	mg/kg
249144	JPM3-CP7-20	10616	75-125	Lead	60000	none	mg/kg
249144	JPM3-CP7-21	10616	75-125	Lead	530	none	mg/kg
249144	JPM3-CP7-22	10616	75-125	Lead	1200	none	mg/kg
249144	JPM3-CP7-23	10616	75-125	Lead	1400	none	mg/kg
249398	JPM3-ITF-CP1-15(1)	-7361	75-125	Lead	3234.94	none	mg/kg
249398	JPM3-ITF-CP1-15(1)	-19	75-125	Copper	292	none	mg/kg
249439	JPM3-ITF-AF236(2)	521	75-125	Lead	145.83	none	mg/kg
249510	JPM3-ITF-CP-1-22(.5)	-288	75-125	Lead	333.38	none	mg/kg
249544	JPM12-AP1(1)	-3365	75-125	Lead	1700	none	mg/kg
249544	JPM12-AP2(1)	-3365	75-125	Lead	18	none	mg/kg
249544	JPM12-AP3(1)	-3365	75-125	Lead	170	none	mg/kg
249544	JPM12-AP4(1)	-3365	75-125	Lead	150	none	mg/kg
249544	JPM12-AP5(1)	-3365	75-125	Lead	8.8	none	mg/kg
249544	JPM12-AP6(1)	-3365	75-125	Lead	130	none	mg/kg
249544	JPM12-AP7(1)	-3365	75-125	Lead	200	none	mg/kg
249544	JPM12-AP8(1)	-3365	75-125	Lead	180	none	mg/kg
249544	JPM12-AP9(1)	-3365	75-125	Lead	12	none	mg/kg
249563	JPM12-AF3(2)	70	75-125	Lead	15	J	mg/kg
249563	JPM12-AF4(2)	70	75-125	Lead	21	J	mg/kg
249563	JPM12-AP10(1)	70	75-125	Lead	20	J	mg/kg
249563	JPM12-AP11(1)	70	75-125	Lead	71	none	mg/kg
249563	JPM12-AP12(1)	70	75-125	Lead	150	none	mg/kg
249563	JPM12-AP13(1)	70	75-125	Lead	160	none	mg/kg
249576	JPM12--AF5(2)	12	75-125	Lead	53	J	mg/kg
249576	JPM12--AF6(2)	12	75-125	Lead	150	none	mg/kg
249576	JPM12--AF7(2)	12	75-125	Lead	49	J	mg/kg
249576	JPM12--AF5(2)	50	75-125	Lead	0.022	J	mg/L
249576	JPM12--AF6(2)	50	75-125	Lead	0.16	J	mg/L
249576	JPM12--AF7(2)	50	75-125	Lead	0.05	J	mg/L
249602	JPL2-ASH	-1610.3	75-125	Lead	92	J	mg/L
249616	JPM12-AP44(1)	5685	75-125	Lead	1879.44	none	mg/kg
249623	JPM12-AP45(1)	35	75-125	Lead	0.4	J	mg/L
249623	JPM12-AP46(1)	35	75-125	Lead	2.7	J	mg/L
249623	JPM12-AP47(1)	35	75-125	Lead	0.04	B J	mg/L
249623	JPM12-AP48(1)	35	75-125	Lead	0.04	B J	mg/L
249623	JPM12-AP49(1)	35	75-125	Lead	0.0071	B J	mg/L
249623	JPM12-AP50(1)	35	75-125	Lead	0.050	U UJ	mg/L
249623	JPM12-AP51(1)	35	75-125	Lead	0.050	U UJ	mg/L
249623	JPM12-AP52(1)	35	75-125	Lead	0.050	U UJ	mg/L
249623	JPM12-AP53(1)	35	75-125	Lead	0.050	U UJ	mg/L
249623	JPM12-AP54(1)	35	75-125	Lead	0.050	U UJ	mg/L
249623	JPM12-AP45(1)	-111	75-125	Lead	120	none	mg/kg

SDG-sample delivery group
ID-identification
%-percent
J-estimated concentration
mg/kg-milligrams per kilogram

TABLE D-7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES (METALS)

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 12)

Laboratory SDG	Associated Sample ID	% Recovery	Control Limits	Associated Analyte	Sample		Units
					Results	Qualifier	
249623	JPM12-AP46(1)	-111	75-125	Lead	1300	none	mg/kg
249623	JPM12-AP47(1)	-111	75-125	Lead	46	J	mg/kg
249623	JPM12-AP48(1)	-111	75-125	Lead	300	none	mg/kg
249623	JPM12-AP49(1)	-111	75-125	Lead	44	J	mg/kg
249623	JPM12-AP50(1)	-111	75-125	Lead	49	none	mg/kg
249623	JPM12-AP51(1)	-111	75-125	Lead	35	J	mg/kg
249623	JPM12-AP52(1)	-111	75-125	Lead	38	J	mg/kg
249623	JPM12-AP53(1)	-111	75-125	Lead	28	J	mg/kg
249623	JPM12-AP54(1)	-111	75-125	Lead	41	J	mg/kg
249674	JPM12-AP69(1)	132	75-125	Lead	60	J	mg/kg
249674	JPM12-AP72(1)	132	75-125	Lead	130	none	mg/kg
249674	JPM12-AF10(2)	132	75-125	Lead	18	J	mg/kg
249674	JPM12-AF11(2)	132	75-125	Lead	18	J	mg/kg
249777	JPM4-AP4(1)	835	75-125	Lead	170	none	mg/kg
249777	JPM4-AP5(1)	835	75-125	Lead	20	J	mg/kg
249777	JPM4-AP6(1)	835	75-125	Lead	900	none	mg/kg
249777	JPM4-AP7(1)	835	75-125	Lead	320	none	mg/kg
249777	JPM4-AP8(1)	835	75-125	Lead	360	none	mg/kg
249777	JPM4-AP9(1)	835	75-125	Lead	410	none	mg/kg
249777	JPM4-AP10(1)	835	75-125	Lead	33	J	mg/kg
249777	JPM4-AF4(2)	835	75-125	Lead	1200	none	mg/kg
249777	JPM4-AF6(2)	1392	75-125	Lead	2300	none	mg/kg
249944	JPM3-ITF-AP98(1)	313	75-125	Lead	41	J	mg/kg
249944	JPM3-ITF-AP99(1)	313	75-125	Lead	45	J	mg/kg
249944	JPM3-ITF-AF249(3)	313	75-125	Lead	51	J	mg/kg
249944	JPM3-ITF-AF250(3)	313	75-125	Lead	220	none	mg/kg
249944	JPM3-ITF-AF251(3)	313	75-125	Lead	22	J	mg/kg
249944	JPM3-ITF-AF252(3)	313	75-125	Lead	140	none	mg/kg
249944	JPM3-ITF-AF253(3)	313	75-125	Lead	170	none	mg/kg
249944	JPM3-ITF-AF254(3)	313	75-125	Lead	190	none	mg/kg
250051	JPL3-CP1(1)	146	75-125	Copper	100	J	mg/kg
250051	JPL3-CP2(1)	146	75-125	Copper	110	J	mg/kg
250051	JPL3-CP3(1)	146	75-125	Copper	350	J	mg/kg
250051	JPL3-CP4(1)	146	75-125	Copper	81	J	mg/kg
250051	JPL3-CP5(1)	146	75-125	Copper	150	J	mg/kg
250051	JPL3-CP6(1)	146	75-125	Copper	50	J	mg/kg
250051	JPL3-CP7(1)	146	75-125	Copper	36	J	mg/kg
250051	JPL3-CP8(1)	146	75-125	Copper	73	J	mg/kg
250051	JPL3-CP9(1)	146	75-125	Copper	60	J	mg/kg
250051	JPL3-CP1(1)	-1	75-125	Lead	110	J	mg/kg
250051	JPL3-CP2(1)	-1	75-125	Lead	120	J	mg/kg
250051	JPL3-CP3(1)	-1	75-125	Lead	180	J	mg/kg
250051	JPL3-CP4(1)	-1	75-125	Lead	87	J	mg/kg
250051	JPL3-CP5(1)	-1	75-125	Lead	140	J	mg/kg
250051	JPL3-CP6(1)	-1	75-125	Lead	40	J	mg/kg
250051	JPL3-CP7(1)	-1	75-125	Lead	24	J	mg/kg
250051	JPL3-CP8(1)	-1	75-125	Lead	73	J	mg/kg
250051	JPL3-CP9(1)	-1	75-125	Lead	54	J	mg/kg
250165	JPM3-ITF-AF255(2)	36	75-125	Antimony	0.49	B J	mg/kg

SDG-sample delivery group
ID-identification
%-percent
J-estimated concentration
mg/kg-milligrams per kilogram

TABLE D-7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES (METALS)

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 12)

Laboratory SDG	Associated Sample ID	% Recovery	Control Limits	Associated Analyte	Sample		Units
					Results	Qualifier	
250165	JPM3-ITF-AF256(2)	36	75-125	Antimony	0.97 B J		mg/kg
250373	JPL2-TOTAL METAL-(PROFILE)	-15	75-125	Cadmium	88.77 none		mg/kg
250373	JPL2-TOTAL METAL-(PROFILE)	5797	75-125	Copper	2947.43 none		mg/kg
250373	JPL2-TOTAL METAL-(PROFILE)	1906	75-125	Lead	499.72 none		mg/kg
250373	JPL2-TOTAL METAL-(PROFILE)	-331	75-125	Silver	132.76 none		mg/kg
250373	JPL2-TOTAL METAL-(PROFILE)	1565	75-125	Zinc	2686.09 none		mg/kg
250429	JPL2-AF51(3)-D	333	75-125	Copper	100 J		mg/kg
250429	JPL2-AP101(0.5)	333	75-125	Copper	200 none		mg/kg
250429	JPL2-AP101(0.5)-D	333	75-125	Copper	670 none		mg/kg
250429	JPL2-AP102(0.5)	333	75-125	Copper	150 none		mg/kg
250429	JPL2-AF51(3)	333	75-125	Copper	79 J		mg/kg
250472	JPL23A-AF1(6)	30	75-125	Antimony	0.84 B J		mg/kg
250472	JPL23A-AP1(1)	30	75-125	Antimony	1.4 B J		mg/kg
250472	JPL23A-AP2(4)	30	75-125	Antimony	2.4 B J		mg/kg
250472	JPL23A-AP3(1)	30	75-125	Antimony	2.5 B J		mg/kg
250472	JPL23A-AP4(4)	29	75-125	Antimony	2.3 U R		mg/kg
250472	JPL23A-AP2(4)-D	29	75-125	Antimony	0.52 B J		mg/kg
250472	JPL23A-AP3(1)-D	29	75-125	Antimony	1.8 B J		mg/kg
250472	JPL23A-AF1(6)	133	75-125	Copper	24 J		mg/kg
250472	JPL23A-AP1(1)	133	75-125	Copper	21 J		mg/kg
250472	JPL23A-AP2(4)	133	75-125	Copper	24 J		mg/kg
250472	JPL23A-AP3(1)	133	75-125	Copper	34 J		mg/kg
250472	JPL23A-AF1(6)	164	75-125	Lead	12 J		mg/kg
250472	JPL23A-AP1(1)	164	75-125	Lead	29 J		mg/kg
250472	JPL23A-AP2(4)	164	75-125	Lead	11 J		mg/kg
250472	JPL23A-AP3(1)	164	75-125	Lead	54 none		mg/kg
250472	JPL23A-AF1(6)	160	75-125	Zinc	59 J		mg/kg
250472	JPL23A-AP1(1)	160	75-125	Zinc	78 J		mg/kg
250472	JPL23A-AP2(4)	160	75-125	Zinc	57 J		mg/kg
250472	JPL23A-AP3(1)	160	75-125	Zinc	140 J		mg/kg
250473	JPL23A-WATER	126	75-125	Lead	1.4 none		mg/kg
250534	JPL23A-AP21(1)	29	75-125	Antimony	0.59 B J		mg/kg
250534	JPL23A-AP22(4)	29	75-125	Antimony	0.60 B J		mg/kg
250534	JPL23A-AF8(6)	29	75-125	Antimony	0.45 B J		mg/kg
250534	JPL23A-AF8(6)-D	29	75-125	Antimony	0.45 B J		mg/kg
250536	JPL23A-AP23(1)	29	75-125	Antimony	0.97 B J		mg/kg
250536	JPL23A-AP24(4)	29	75-125	Antimony	0.57 B J		mg/kg
250536	JPL23A-AP25(1)	29	75-125	Antimony	0.62 B J		mg/kg
250536	JPL23A-AP26(4)	29	75-125	Antimony	0.70 B J		mg/kg
250536	JPL23A-AP27(1)	29	75-125	Antimony	0.79 B J		mg/kg
250536	JPL23A-AP28(4)	29	75-125	Antimony	0.63 B J		mg/kg
250536	JPL23A-AP29(1)	29	75-125	Antimony	0.54 B J		mg/kg
250536	JPL23A-AP30(4)	29	75-125	Antimony	0.51 B J		mg/kg
250536	JPL23A-AF9(6)	29	75-125	Antimony	0.49 B J		mg/kg
250557	JPL23A-AP31(1)	-15	75-125	Zinc	260 none		mg/kg
250595	JPL2-AP109(0.5)	31	75-125	Cadmium	15.83 J		mg/kg
250595	JPL2-AP110(0.5)	31	75-125	Cadmium	4.4 J		mg/kg
250595	JPL2-AP111(0.5)	31	75-125	Cadmium	11 J		mg/kg
250595	JPL2-AP109(0.5)	7900	75-125	Copper	2090.99 none		mg/kg

SDG-sample delivery group
ID-identification
%-percent
J-estimated concentration
mg/kg-milligrams per kilogram

TABLE D-7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES (METALS)

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 4 of 12)

Laboratory SDG	Associated Sample ID	% Recovery	Control Limits	Associated Analyte	Sample		Units
					Results	Qualifier	
250595	JPL2-AP110(0.5)	7900	75-125	Copper	79 J		mg/kg
250595	JPL2-AP111(0.5)	7900	75-125	Copper	7900 none		mg/kg
250595	JPL2-AP109(0.5)	1047	75-125	Lead	293.59 none		mg/kg
250595	JPL2-AP110(0.5)	1047	75-125	Lead	39 J		mg/kg
250595	JPL2-AP111(0.5)	1047	75-125	Lead	250 none		mg/kg
250595	JPL2-AP109(0.5)	-119	75-125	Silver	17.44 J		mg/kg
250595	JPL2-AP110(0.5)	-119	75-125	Silver	0.24 B J		mg/kg
250595	JPL2-AP111(0.5)	-119	75-125	Silver	1.6 J		mg/kg
250595	JPL2-AP109(0.5)	286	75-125	Zinc	1712.41 J		mg/kg
250595	JPL2-AP110(0.5)	286	75-125	Zinc	150 J		mg/kg
250595	JPL2-AP111(0.5)	286	75-125	Zinc	1400 J		mg/kg
500-4270-2	JPL2-AP117(0.5)	537	75-125	Copper	390 none		mg/kg
500-4270-2	JPL2-AP118(0.5)	537	75-125	Copper	130 none		mg/kg
500-4270-2	JPL2-AP119(0.5)	537	75-125	Copper	650 none		mg/kg
500-4270-2	JPL2-AP120(0.5)	537	75-125	Copper	190 none		mg/kg
500-4270-2	JPL2-PF1(2)	537	75-125	Copper	210 none		mg/kg
500-4270-2	JPL2-PF2(2)	537	75-125	Copper	290 none		mg/kg
500-4270-2	JPL2-PF3(2)	537	75-125	Copper	9100 none		mg/kg
500-4270-2	JPL2-AP117(0.5)	189	75-125	Lead	66 none		mg/kg
500-4270-2	JPL2-AP118(0.5)	189	75-125	Lead	46 J		mg/kg
500-4270-2	JPL2-AP119(0.5)	189	75-125	Lead	97 none		mg/kg
500-4270-2	JPL2-AP120(0.5)	189	75-125	Lead	33 J		mg/kg
500-4270-2	JPL2-PF1(2)	189	75-125	Lead	120 none		mg/kg
500-4270-2	JPL2-PF2(2)	189	75-125	Lead	130 none		mg/kg
500-4270-2	JPL2-PF3(2)	189	75-125	Lead	290 none		mg/kg
500-4270-2	JPL2-AP117(0.5)	258	75-125	Zinc	450 none		mg/kg
500-4270-2	JPL2-AP118(0.5)	258	75-125	Zinc	170 J		mg/kg
500-4270-2	JPL2-AP119(0.5)	258	75-125	Zinc	750 none		mg/kg
500-4270-2	JPL2-AP120(0.5)	258	75-125	Zinc	240 none		mg/kg
500-4270-2	JPL2-PF1(2)	258	75-125	Zinc	370 none		mg/kg
500-4270-2	JPL2-PF2(2)	258	75-125	Zinc	560 none		mg/kg
500-4270-2	JPL2-PF3(2)	258	75-125	Zinc	3600 none		mg/kg
500-4317-4	JPL2-AP122(0.5)	5340	75-125	Copper	80 J		mg/kg
500-4317-4	JPL2-SP8(0.5)	5340	75-125	Copper	52 J		mg/kg
500-4317-4	JPL2-SP9(0.5)	5340	75-125	Copper	890 none		mg/kg
500-4317-4	JPL2-AST-TF1(3)	5340	75-125	Copper	32 J		mg/kg
500-4317-4	JPL2-AST-TF2(4)	5340	75-125	Copper	28 J		mg/kg
500-4317-4	JPL2-AST-TP1(0.5)	5340	75-125	Copper	19 J		mg/kg
500-4317-4	JPL2-AST-TP2(0.5)	5340	75-125	Copper	180 none		mg/kg
500-4317-4	JPL2-AST-TP3(0.5)	5340	75-125	Copper	56 J		mg/kg
500-4317-4	JPL2-AP122(0.5)	769	75-125	Lead	23 J		mg/kg
500-4317-4	JPL2-SP8(0.5)	769	75-125	Lead	1000 none		mg/kg
500-4317-4	JPL2-SP9(0.5)	769	75-125	Lead	87 none		mg/kg
500-4317-4	JPL2-AST-TF1(3)	769	75-125	Lead	16 J		mg/kg
500-4317-4	JPL2-AST-TF2(4)	769	75-125	Lead	14 J		mg/kg
500-4317-4	JPL2-AST-TP1(0.5)	769	75-125	Lead	13 J		mg/kg
500-4317-4	JPL2-AST-TP2(0.5)	769	75-125	Lead	110 none		mg/kg
500-4317-4	JPL2-AST-TP3(0.5)	769	75-125	Lead	24 J		mg/kg
500-4317-4	JPL2-AP122(0.5)	1190	75-125	Zinc	99 J		mg/kg

SDG-sample delivery group
ID-identification
%-percent
J-estimated concentration
mg/kg-milligrams per kilogram

TABLE D-7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES (METALS)

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Associated Sample ID	% Recovery	Control Limits	Associated Analyte	Sample		Units
					Results	Qualifier	
500-4317-4	JPL2-SP8(0.5)	1190	75-125	Zinc	95 J		mg/kg
500-4317-4	JPL2-SP9(0.5)	1190	75-125	Zinc	400 none		mg/kg
500-4317-4	JPL2-AST-TF1(3)	1190	75-125	Zinc	67 J		mg/kg
500-4317-4	JPL2-AST-TF2(4)	1190	75-125	Zinc	66 J		mg/kg
500-4317-4	JPL2-AST-TP1(0.5)	1190	75-125	Zinc	46 J		mg/kg
500-4317-4	JPL2-AST-TP2(0.5)	1190	75-125	Zinc	180 J		mg/kg
500-4317-4	JPL2-AST-TP3(0.5)	1190	75-125	Zinc	76 J		mg/kg
500-4661-2	JPWR-369-1W-1	-103	75-125	Lead	57 J		mg/kg
500-4661-2	JPWR-369-1W-2	-103	75-125	Lead	24 J		mg/kg
500-4661-2	JPWR-369-1W-3	-103	75-125	Lead	23 J		mg/kg
500-4661-2	JPWR-369-1W-5	-103	75-125	Lead	17 J		mg/kg
500-4661-2	JPWR-369-1W-7	-103	75-125	Lead	27 J		mg/kg
500-4661-2	JPWR-369-1W-8	-103	75-125	Lead	22 J		mg/kg
500-4661-2	JPWR-369-1W-10	-103	75-125	Lead	34 J		mg/kg
500-4661-2	JPWR-369-1W-11	-103	75-125	Lead	22 J		mg/kg
500-4661-2	JPWR-369-1W-12	-103	75-125	Lead	74 none		mg/kg
500-4661-2	JPWR-369-1W-13	-103	75-125	Lead	23 J		mg/kg
500-4661-2	JPWR-369-1W-14	-103	75-125	Lead	22 J		mg/kg
500-4661-2	JPWR-369-1W-16	-103	75-125	Lead	31 J		mg/kg
500-4661-2	JPWR-369-1W-5-D	-103	75-125	Lead	15 J		mg/kg
500-4661-2	JPWR-369-1W-14-D	-103	75-125	Lead	18 J		mg/kg
500-4662-2	JPWR370-1E-2	43	75-125	Lead	22 J		mg/kg
500-4662-2	JPWR370-1E-3	43	75-125	Lead	22 J		mg/kg
500-4662-2	JPWR370-1E-5	43	75-125	Lead	18 J		mg/kg
500-4662-2	JPWR370-1E-6	43	75-125	Lead	17 J		mg/kg
500-4662-2	JPWR370-1E-8	43	75-125	Lead	17 J		mg/kg
500-4662-2	JPWR370-1E-9	43	75-125	Lead	14 J		mg/kg
500-4662-2	JPWR370-1E-11	43	75-125	Lead	27 J		mg/kg
500-4662-2	JPWR370-1E-12	43	75-125	Lead	13 J		mg/kg
500-4662-2	JPWR370-1E-13	43	75-125	Lead	12 J		mg/kg
500-4662-2	JPWR370-1E-14	43	75-125	Lead	19 J		mg/kg
500-4662-2	JPWR370-1E-15	43	75-125	Lead	27 J		mg/kg
500-4662-2	JPWR370-1E-16	43	75-125	Lead	22 J		mg/kg
500-4662-2	JPWR370-1E-13-D	43	75-125	Lead	20 J		mg/kg
500-4662-2	JPWR370-1E-15-D	43	75-125	Lead	16 J		mg/kg
500-5055-1	JPL3-BARREL-White Substance	54	75-125	Antimony	3.7 UJ		mg/kg
500-5122-1	JPM4-AF7(1)	234	75-125	Lead	25000 B none		mg/kg
500-5122-1	JPM4-AP11(0.5)	234	75-125	Lead	21 B J		mg/kg
500-5122-1	JPM4-AP12(0.5)	234	75-125	Lead	130 B none		mg/kg
500-5122-1	JPM4-AP13(0.5)	234	75-125	Lead	18000 B none		mg/kg
500-5122-1	JPM4-AP14(0.5)	234	75-125	Lead	290 B none		mg/kg
500-5265-1	JPL5-PCN-1(3)	1790	75-125	Copper	280 none		mg/kg
500-5265-1	JPL5-PCN-2(3)	1790	75-125	Copper	110 none		mg/kg
500-5265-1	JPL5-PCN-3(3)	1790	75-125	Copper	340 none		mg/kg
500-5265-1	JPL5-PCN-4(3)	1790	75-125	Copper	38 J		mg/kg
500-5265-1	JPL5-PCN-5(3)	1790	75-125	Copper	33 J		mg/kg
500-5265-1	JPL5-PCN-6(3)	1790	75-125	Copper	42 J		mg/kg
500-5265-1	JPL5-PCN-7(3)	1790	75-125	Copper	39 J		mg/kg
500-5265-1	JPL5-PCN-8(3)	1790	75-125	Copper	110 none		mg/kg

SDG-sample delivery group
ID-identification
%-percent
J-estimated concentration
mg/kg-milligrams per kilogram

TABLE D-7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES (METALS)

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Associated Sample ID	% Recovery	Control Limits	Associated Analyte	Sample		Units
					Results	Qualifier	
500-5265-1	JPL5-PCN-9(3)	1790	75-125	Copper	150	none	mg/kg
500-5265-1	JPL5-PCN-10(3)	1790	75-125	Copper	460	none	mg/kg
500-5265-1	JPL5-PCN-1(3)	622	75-125	Lead	140	none	mg/kg
500-5265-1	JPL5-PCN-2(3)	622	75-125	Lead	250	none	mg/kg
500-5265-1	JPL5-PCN-3(3)	622	75-125	Lead	93	none	mg/kg
500-5265-1	JPL5-PCN-4(3)	622	75-125	Lead	28	J	mg/kg
500-5265-1	JPL5-PCN-5(3)	622	75-125	Lead	23	J	mg/kg
500-5265-1	JPL5-PCN-6(3)	622	75-125	Lead	29	J	mg/kg
500-5265-1	JPL5-PCN-7(3)	622	75-125	Lead	35	J	mg/kg
500-5265-1	JPL5-PCN-8(3)	622	75-125	Lead	79	none	mg/kg
500-5265-1	JPL5-PCN-9(3)	622	75-125	Lead	220	none	mg/kg
500-5265-1	JPL5-PCN-10(3)	622	75-125	Lead	430	none	mg/kg
500-5265-1	JPL5-PCN-1(3)	292	75-125	Zinc	870	none	mg/kg
500-5265-1	JPL5-PCN-2(3)	292	75-125	Zinc	470	none	mg/kg
500-5265-1	JPL5-PCN-3(3)	292	75-125	Zinc	1700	none	mg/kg
500-5265-1	JPL5-PCN-4(3)	292	75-125	Zinc	130	J	mg/kg
500-5265-1	JPL5-PCN-5(3)	292	75-125	Zinc	95	J	mg/kg
500-5265-1	JPL5-PCN-6(3)	292	75-125	Zinc	120	J	mg/kg
500-5265-1	JPL5-PCN-7(3)	292	75-125	Zinc	130	J	mg/kg
500-5265-1	JPL5-PCN-8(3)	292	75-125	Zinc	440	none	mg/kg
500-5265-1	JPL5-PCN-9(3)	292	75-125	Zinc	550	none	mg/kg
500-5265-1	JPL5-PCN-10(3)	292	75-125	Zinc	800	none	mg/kg
500-5306-1	JPL5-14(3)	-119	75-125	Lead	14	J	mg/kg
500-5306-1	JPL5-15(0)	-119	75-125	Lead	72	none	mg/kg
500-5347-1	JPL3-DITCH-1(0)	35	75-125	Arsenic	18	J	mg/kg
500-5347-1	JPL3-DITCH-2(0)	35	75-125	Arsenic	7.9	J	mg/kg
500-5347-1	JPL3-DITCH-3(0)	35	75-125	Arsenic	11	J	mg/kg
500-5347-1	JPL3-DITCH-4(0)	35	75-125	Arsenic	7.9	J	mg/kg
500-5499-1	JPL5-AP10(0.5)	30	75-125	Antimony	1.5	J none	mg/kg
500-5499-1	JPL5-AP11(0.5)	30	75-125	Antimony	0.82	J none	mg/kg
500-5499-1	JPL5-AP12(0.5)	30	75-125	Antimony	<2.1	none	mg/kg
500-5499-1	JPL5-AP13(0.5)	30	75-125	Antimony	<2.2	none	mg/kg
500-5499-1	JPL5-AP14(0.5)	30	75-125	Antimony	1.0	J none	mg/kg
500-5499-1	JPL5-AP15(0.5)	30	75-125	Antimony	0.61	J none	mg/kg
500-5499-1	JPL5-AP16(0.5)	30	75-125	Antimony	<2.0	none	mg/kg
500-5499-1	JPL5-AP17(0.5)	30	75-125	Antimony	1.0	J none	mg/kg
500-5499-1	JPL5-AP18(0.5)	31	75-125	Antimony	<2.2	none	mg/kg
500-5499-1	JPL5-AP19(0.5)	31	75-125	Antimony	<2.2	none	mg/kg
500-5499-1	JPL5-AP20(0.5)	31	75-125	Antimony	<2.0	none	mg/kg
500-5499-1	JPL5-AP21(0.5)	31	75-125	Antimony	<2.1	none	mg/kg
500-5499-1	JPL5-AP22(0.5)	31	75-125	Antimony	<2.4	none	mg/kg
500-5499-1	JPL5-AP23(0.5)	29	75-125	Antimony	<2.0	none	mg/kg
500-5499-1	JPL5-AP24(0.5)	29	75-125	Antimony	<2.1	none	mg/kg
500-5499-1	JPL5-AP25(0.5)	29	75-125	Antimony	<1.9	none	mg/kg
500-5499-1	JPL5-AP26(0.5)	29	75-125	Antimony	<2.2	none	mg/kg
500-5499-1	JPL5-AP27(0.5)	27	75-125	Antimony	<2.2	none	mg/kg
500-5499-1	JPL5-AP28(0.5)	27	75-125	Antimony	<2.2	none	mg/kg
500-5499-1	JPL5-AP29(0.5)	27	75-125	Antimony	<2.3	none	mg/kg
500-5499-1	JPL5-AP30(0.5)	27	75-125	Antimony	<2.5	none	mg/kg

SDG-sample delivery group
ID-identification
%-percent
J-estimated concentration
mg/kg-milligrams per kilogram

TABLE D-7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES (METALS)

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 7 of 12)

Laboratory SDG	Associated Sample ID	% Recovery	Control Limits	Associated Analyte	Sample		Units
					Results	Qualifier	
500-5499-1	JPL5-AP31(0.5)	27	75-125	Antimony	<2.2	none	mg/kg
500-5499-1	JPL5-AP32(0.5)	27	75-125	Antimony	<2.1	none	mg/kg
500-5499-1	JPL5-AP33(0.5)	27	75-125	Antimony	<2.0	none	mg/kg
500-5499-1	JPL5-AP10(0.5)	61	75-125	Lead	59	none	mg/kg
500-5499-1	JPL5-AP11(0.5)	61	75-125	Lead	29	J	mg/kg
500-5499-1	JPL5-AP12(0.5)	61	75-125	Lead	18	J	mg/kg
500-5499-1	JPL5-AP13(0.5)	61	75-125	Lead	20	J	mg/kg
500-5499-1	JPL5-AP14(0.5)	61	75-125	Lead	16	J	mg/kg
500-5499-1	JPL5-AP15(0.5)	61	75-125	Lead	20	J	mg/kg
500-5499-1	JPL5-AP16(0.5)	61	75-125	Lead	13	J	mg/kg
500-5499-1	JPL5-AP17(0.5)	61	75-125	Lead	14	J	mg/kg
500-5499-1	JPL5-AP18(0.5)	61	75-125	Lead	16	J	mg/kg
500-5499-1	JPL5-AP19(0.5)	61	75-125	Lead	13	J	mg/kg
500-5499-1	JPL5-AP20(0.5)	61	75-125	Lead	16	J	mg/kg
500-5499-1	JPL5-AP21(0.5)	61	75-125	Lead	16	J	mg/kg
500-5499-1	JPL5-AP22(0.5)	61	75-125	Lead	21	J	mg/kg
500-5499-1	JPL5-AP23(0.5)	61	75-125	Lead	13	J	mg/kg
500-5499-1	JPL5-AP24(0.5)	61	75-125	Lead	16	J	mg/kg
500-5499-1	JPL5-AP25(0.5)	61	75-125	Lead	18	J	mg/kg
500-5499-1	JPL5-AP26(0.5)	61	75-125	Lead	16	J	mg/kg
500-5499-1	JPL5-AP27(0.5)	61	75-125	Lead	13	J	mg/kg
500-5499-1	JPL5-AP28(0.5)	61	75-125	Lead	22	J	mg/kg
500-5499-1	JPL5-AP29(0.5)	61	75-125	Lead	24	J	mg/kg
500-5499-1	JPL5-AP30(0.5)	61	75-125	Lead	16	J	mg/kg
500-5499-1	JPL5-AP31(0.5)	61	75-125	Lead	14	J	mg/kg
500-5499-1	JPL5-AP32(0.5)	61	75-125	Lead	14	J	mg/kg
500-5499-1	JPL5-AP33(0.5)	61	75-125	Lead	16	J	mg/kg
500-5501-1	JPL5-AP34(0.5)	29	75-125	Antimony	0.68	J J	mg/kg
500-5501-1	JPL5-AP35(0.5)	29	75-125	Antimony	<2.0	R	mg/kg
500-5501-1	JPL5-AP36(0.5)	29	75-125	Antimony	1.0	J J	mg/kg
500-5501-1	JPL5-AF9(3)	29	75-125	Antimony	0.77	J J	mg/kg
500-5501-1	JPL5-AF10(3)	29	75-125	Antimony	<2.2	R	mg/kg
500-5501-1	JPL5-AF11(3)	29	75-125	Antimony	<1.8	R	mg/kg
500-5501-1	JPL5-AF12(3)	29	75-125	Antimony	0.77	J J	mg/kg
500-5501-1	JPL5-AF13(3)	28	75-125	Antimony	0.59	J J	mg/kg
500-5501-1	JPL5-AF14(3)	28	75-125	Antimony	<2.0	R	mg/kg
500-5501-1	JPL5-AF15(3)	28	75-125	Antimony	0.93	J J	mg/kg
500-5501-1	JPL5-AF16(3)	28	75-125	Antimony	<2.2	R	mg/kg
500-5501-1	JPL5-AF17(3)	28	75-125	Antimony	<2.0	R	mg/kg
500-5501-1	JPL5-AF18(3)	28	75-125	Antimony	0.88	J J	mg/kg
500-5501-1	JPL5-AF19(3)	28	75-125	Antimony	<1.9	R	mg/kg
500-5501-1	JPL5-AF20(3)	26	75-125	Antimony	0.84	J J	mg/kg
500-5501-1	JPL5-AF21(3)	26	75-125	Antimony	1.3	J J	mg/kg
500-5501-1	JPL5-AF20(3)-D	26	75-125	Antimony	0.64	J J	mg/kg
500-5501-1	JPL5-AF21(3)-D	26	75-125	Antimony	<1.7	R	mg/kg
500-5501-1	JPL5-AF13(3)	74	75-125	Lead	14	J	mg/kg
500-5501-1	JPL5-AF14(3)	74	75-125	Lead	16	J	mg/kg
500-5501-1	JPL5-AF15(3)	74	75-125	Lead	17	J	mg/kg
500-5501-1	JPL5-AF16(3)	74	75-125	Lead	14	J	mg/kg

SDG-sample delivery group
ID-identification
%-percent
J-estimated concentration
mg/kg-milligrams per kilogram

TABLE D-7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES (METALS)

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 8 of 12)

Laboratory SDG	Associated Sample ID	% Recovery	Control Limits	Associated Analyte	Sample		Units
					Results	Qualifier	
500-5501-1	JPL5-AF17(3)	74	75-125	Lead	19 J		mg/kg
500-5501-1	JPL5-AF18(3)	74	75-125	Lead	13 J		mg/kg
500-5501-1	JPL5-AF19(3)	74	75-125	Lead	46 none		mg/kg
500-5719-1	JPL3-STOCKPILE-1(0)	33	75-125	Copper	210 none		mg/kg
500-5719-1	JPL3-STOCKPILE-2(0)	33	75-125	Copper	130 none		mg/kg
500-5719-1	JPL3-STOCKPILE-1(0)	73	75-125	Lead	270 none		mg/kg
500-5719-1	JPL3-STOCKPILE-2(0)	73	75-125	Lead	170 none		mg/kg
500-5954-1	JPL5-PCN2-11(5)	70	75-125	Lead	15 J		mg/kg
500-5954-1	JPL5-PCN2-12(5)	70	75-125	Lead	12 J		mg/kg
500-5954-1	JPL5-PCN2-13(5)	70	75-125	Lead	14 J		mg/kg
500-5954-1	JPL5-PCN2-14(5)	70	75-125	Lead	13 J		mg/kg
500-5954-1	JPL5-PCN2-15(5)	70	75-125	Lead	12 J		mg/kg
500-5954-1	JPL5-PCN2-16(5)	70	75-125	Lead	13 J		mg/kg
500-5954-1	JPL5-PCN2-17(5)	70	75-125	Lead	13 J		mg/kg
500-5954-1	JPL5-PCN2-18(5)	70	75-125	Lead	14 J		mg/kg
500-5954-1	JPL5-PCN2-19(5)	70	75-125	Lead	13 J		mg/kg
500-5954-1	JPL5-PCN2-20(5)	70	75-125	Lead	12 J		mg/kg
500-5954-1	JPL5-PCN2-21(5)	70	75-125	Lead	15 J		mg/kg
500-5954-1	JPL5-PCN2-22(5)	70	75-125	Lead	18 J		mg/kg
500-5954-1	JPL5-PCN2-23(5)	70	75-125	Lead	15 J		mg/kg
500-5954-1	JPL5-PCN2-24(5)	70	75-125	Lead	18 J		mg/kg
500-5954-1	JPL5-PCN2-25(5)	70	75-125	Lead	16 J		mg/kg
500-5954-1	JPL5-PCN2-26(5)	70	75-125	Lead	25 J		mg/kg
500-5954-1	JPL5-PCN2-27(5)	70	75-125	Lead	18 J		mg/kg
500-6018-1	JPL5-AF24(4)	165	75-125	Arsenic	41 J		mg/kg
500-6018-1	JPL5-AF25(4)	165	75-125	Arsenic	17 J		mg/kg
500-6018-1	JPL5-AF26(4)	165	75-125	Arsenic	4.2 J		mg/kg
500-6133-1	JPL2-AP137(0.5)	-180	75-125	Copper	630 B none		mg/kg
500-6133-1	JPL2-AP138(0.5)	-180	75-125	Copper	340 B none		mg/kg
500-6133-1	JPL2-AP137(0.5)	-146	75-125	Zinc	840 B none		mg/kg
500-6592-1	JPL3-AF10(1)	161	75-125	Arsenic	15 J		mg/kg
500-6592-1	JPL3-AF11(1)	161	75-125	Arsenic	16 J		mg/kg
500-6592-1	JPL3-AF12(1)	161	75-125	Arsenic	11 J		mg/kg
500-6592-1	JPL3-AF13(1)	161	75-125	Arsenic	16 J		mg/kg
500-6592-1	JPL3-AF14(1)	161	75-125	Arsenic	11 J		mg/kg
500-6592-1	JPL3-AF15(1)	161	75-125	Arsenic	6.3 J		mg/kg
500-6592-1	JPL3-AF16(1)	161	75-125	Arsenic	19 J		mg/kg
500-6592-1	JPL3-AF7(1)	161	75-125	Arsenic	15 J		mg/kg
500-6592-1	JPL3-AF8(1)	161	75-125	Arsenic	12 J		mg/kg
500-6592-1	JPL3-AF9(1)	161	75-125	Arsenic	14 J		mg/kg
500-6592-1	JPL3-AP12(1)	161	75-125	Arsenic	18 J		mg/kg
500-6592-1	JPL3-AP13(1)	161	75-125	Arsenic	16 J		mg/kg
500-6592-1	JPL3-AP14(1)	161	75-125	Arsenic	16 J		mg/kg
500-6592-1	JPL3-AP15(1)	161	75-125	Arsenic	16 J		mg/kg
500-6592-1	JPL3-AP16(1)	161	75-125	Arsenic	8.5 J		mg/kg
500-6592-1	JPL3-AP17(1)	161	75-125	Arsenic	16 J		mg/kg
500-6592-1	JPL3-AP18(1)	161	75-125	Arsenic	9.7 J		mg/kg
500-6592-1	JPL3-AP19(1)	161	75-125	Arsenic	14 J		mg/kg
500-6592-1	JPL3-AF10(1)	13	75-125	Barium	96 J		mg/kg

SDG-sample delivery group
ID-identification
%-percent
J-estimated concentration
mg/kg-milligrams per kilogram

TABLE D-7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES (METALS)

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 9 of 12)

Laboratory SDG	Associated Sample ID	% Recovery	Control Limits	Associated Analyte	Sample		Units
					Results	Qualifier	
500-6592-1	JPL3-AF11(1)	13	75-125	Barium	110 J		mg/kg
500-6592-1	JPL3-AF12(1)	13	75-125	Barium	81 J		mg/kg
500-6592-1	JPL3-AF13(1)	13	75-125	Barium	160 J		mg/kg
500-6592-1	JPL3-AF14(1)	13	75-125	Barium	130 J		mg/kg
500-6592-1	JPL3-AF15(1)	13	75-125	Barium	90 J		mg/kg
500-6592-1	JPL3-AF16(1)	13	75-125	Barium	510 J		mg/kg
500-6592-1	JPL3-AF7(1)	13	75-125	Barium	89 J		mg/kg
500-6592-1	JPL3-AF8(1)	13	75-125	Barium	110 J		mg/kg
500-6592-1	JPL3-AF9(1)	13	75-125	Barium	90 J		mg/kg
500-6592-1	JPL3-AP12(1)	13	75-125	Barium	430 J		mg/kg
500-6592-1	JPL3-AP13(1)	13	75-125	Barium	190 J		mg/kg
500-6592-1	JPL3-AP14(1)	13	75-125	Barium	100 J		mg/kg
500-6592-1	JPL3-AP15(1)	13	75-125	Barium	160 J		mg/kg
500-6592-1	JPL3-AP16(1)	13	75-125	Barium	180 J		mg/kg
500-6592-1	JPL3-AP17(1)	13	75-125	Barium	700 J		mg/kg
500-6592-1	JPL3-AP18(1)	13	75-125	Barium	130 J		mg/kg
500-6592-1	JPL3-AP19(1)	13	75-125	Barium	130 J		mg/kg
500-6592-1	JPL3-AF10(1)	136	75-125	Chromium	22 J		mg/kg
500-6592-1	JPL3-AF11(1)	136	75-125	Chromium	22 J		mg/kg
500-6592-1	JPL3-AF12(1)	136	75-125	Chromium	15 J		mg/kg
500-6592-1	JPL3-AF13(1)	136	75-125	Chromium	62 J		mg/kg
500-6592-1	JPL3-AF14(1)	136	75-125	Chromium	16 J		mg/kg
500-6592-1	JPL3-AF15(1)	136	75-125	Chromium	15 J		mg/kg
500-6592-1	JPL3-AF16(1)	136	75-125	Chromium	29 J		mg/kg
500-6592-1	JPL3-AF7(1)	136	75-125	Chromium	22 J		mg/kg
500-6592-1	JPL3-AF8(1)	136	75-125	Chromium	19 J		mg/kg
500-6592-1	JPL3-AF9(1)	136	75-125	Chromium	14 J		mg/kg
500-6592-1	JPL3-AP12(1)	136	75-125	Chromium	26 J		mg/kg
500-6592-1	JPL3-AP13(1)	136	75-125	Chromium	25 J		mg/kg
500-6592-1	JPL3-AP14(1)	136	75-125	Chromium	18 J		mg/kg
500-6592-1	JPL3-AP15(1)	136	75-125	Chromium	21 J		mg/kg
500-6592-1	JPL3-AP16(1)	136	75-125	Chromium	15 J		mg/kg
500-6592-1	JPL3-AP17(1)	136	75-125	Chromium	44 J		mg/kg
500-6592-1	JPL3-AP18(1)	136	75-125	Chromium	16 J		mg/kg
500-6592-1	JPL3-AP19(1)	136	75-125	Chromium	25 J		mg/kg
500-6592-1	JPL3-AF10(1)	387	75-125	Copper	34 B J		mg/kg
500-6592-1	JPL3-AF11(1)	387	75-125	Copper	31 B J		mg/kg
500-6592-1	JPL3-AF12(1)	387	75-125	Copper	24 B J		mg/kg
500-6592-1	JPL3-AF13(1)	387	75-125	Copper	120 B none		mg/kg
500-6592-1	JPL3-AF14(1)	387	75-125	Copper	74 B J		mg/kg
500-6592-1	JPL3-AF15(1)	387	75-125	Copper	18 B J		mg/kg
500-6592-1	JPL3-AF16(1)	387	75-125	Copper	450 B none		mg/kg
500-6592-1	JPL3-AF7(1)	387	75-125	Copper	49 B J		mg/kg
500-6592-1	JPL3-AF8(1)	387	75-125	Copper	72 B J		mg/kg
500-6592-1	JPL3-AF9(1)	387	75-125	Copper	23 B J		mg/kg
500-6592-1	JPL3-AP12(1)	387	75-125	Copper	260 B none		mg/kg
500-6592-1	JPL3-AP13(1)	387	75-125	Copper	250 none		mg/kg
500-6592-1	JPL3-AP14(1)	387	75-125	Copper	120 B none		mg/kg
500-6592-1	JPL3-AP15(1)	387	75-125	Copper	250 B none		mg/kg

SDG-sample delivery group
ID-identification
%-percent
J-estimated concentration
mg/kg-milligrams per kilogram

TABLE D-7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES (METALS)

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 10 of 12)

Laboratory SDG	Associated Sample ID	% Recovery	Control Limits	Associated Analyte	Sample		Units
					Results	Qualifier	
500-6592-1	JPL3-AP16(1)	387	75-125	Copper	62 B J		mg/kg
500-6592-1	JPL3-AP17(1)	387	75-125	Copper	3100 B	none	mg/kg
500-6592-1	JPL3-AP18(1)	387	75-125	Copper	52 B J		mg/kg
500-6592-1	JPL3-AP19(1)	387	75-125	Copper	62 B J		mg/kg
500-6592-1	JPL3-AF10(1)	603	75-125	Lead	19 J		mg/kg
500-6592-1	JPL3-AF11(1)	603	75-125	Lead	18 J		mg/kg
500-6592-1	JPL3-AF12(1)	603	75-125	Lead	22 J		mg/kg
500-6592-1	JPL3-AF13(1)	603	75-125	Lead	81	none	mg/kg
500-6592-1	JPL3-AF14(1)	603	75-125	Lead	51	none	mg/kg
500-6592-1	JPL3-AF15(1)	603	75-125	Lead	18 J		mg/kg
500-6592-1	JPL3-AF16(1)	603	75-125	Lead	300	none	mg/kg
500-6592-1	JPL3-AF7(1)	603	75-125	Lead	33 J		mg/kg
500-6592-1	JPL3-AF8(1)	603	75-125	Lead	52	none	mg/kg
500-6592-1	JPL3-AF9(1)	603	75-125	Lead	21 J		mg/kg
500-6592-1	JPL3-AP12(1)	603	75-125	Lead	190	none	mg/kg
500-6592-1	JPL3-AP13(1)	603	75-125	Lead	190	none	mg/kg
500-6592-1	JPL3-AP14(1)	603	75-125	Lead	83	none	mg/kg
500-6592-1	JPL3-AP15(1)	603	75-125	Lead	9300	none	mg/kg
500-6592-1	JPL3-AP16(1)	603	75-125	Lead	61	none	mg/kg
500-6592-1	JPL3-AP17(1)	603	75-125	Lead	900	none	mg/kg
500-6592-1	JPL3-AP18(1)	603	75-125	Lead	35 J		mg/kg
500-6592-1	JPL3-AP19(1)	603	75-125	Lead	40 J		mg/kg
500-6592-1	JPL3-AF10(1)	393	75-125	Zinc	100 B J		mg/kg
500-6592-1	JPL3-AF11(1)	393	75-125	Zinc	87 B J		mg/kg
500-6592-1	JPL3-AF12(1)	393	75-125	Zinc	75 B J		mg/kg
500-6592-1	JPL3-AF13(1)	393	75-125	Zinc	270 B	none	mg/kg
500-6592-1	JPL3-AF14(1)	393	75-125	Zinc	180 B J		mg/kg
500-6592-1	JPL3-AF15(1)	393	75-125	Zinc	58 B J		mg/kg
500-6592-1	JPL3-AF16(1)	393	75-125	Zinc	1700 B	none	mg/kg
500-6592-1	JPL3-AF7(1)	393	75-125	Zinc	140 B J		mg/kg
500-6592-1	JPL3-AF8(1)	393	75-125	Zinc	210 B	none	mg/kg
500-6592-1	JPL3-AF9(1)	393	75-125	Zinc	82 B J		mg/kg
500-6592-1	JPL3-AP12(1)	393	75-125	Zinc	710 B	none	mg/kg
500-6592-1	JPL3-AP13(1)	393	75-125	Zinc	2700 B	none	mg/kg
500-6592-1	JPL3-AP14(1)	393	75-125	Zinc	310 B	none	mg/kg
500-6592-1	JPL3-AP15(1)	393	75-125	Zinc	590 B	none	mg/kg
500-6592-1	JPL3-AP16(1)	393	75-125	Zinc	260 B	none	mg/kg
500-6592-1	JPL3-AP17(1)	393	75-125	Zinc	1500 B	none	mg/kg
500-6592-1	JPL3-AP18(1)	393	75-125	Zinc	100 B J		mg/kg
500-6592-1	JPL3-AP19(1)	393	75-125	Zinc	170 B J		mg/kg
500-6112-1	JPL5-SP1(1)	31	75-125	Antimony	1.0 J J		mg/kg
500-6112-1	JPL5-SP2(1)	31	75-125	Antimony	0.75 J J		mg/kg
500-6112-1	JPL5-SP3(1)	31	75-125	Antimony	<2.6 UJ		mg/kg
500-6112-1	JPL5-SP4(1)	31	75-125	Antimony	0.96 J J		mg/kg
500-6112-1	JPL5-SP5(1)	31	75-125	Antimony	<2.5 UJ		mg/kg
500-6112-1	JPL5-SP6(1)	31	75-125	Antimony	<2.3 UJ		mg/kg
500-6332-1	JPL5-AF28(2)	29	75-125	Antimony	<2.3 R		mg/kg
500-6332-1	JPL5-AF29(2)	29	75-125	Antimony	8.1 J		mg/kg
500-6332-1	JPL5-AP42(0.5)	29	75-125	Antimony	3.3 J		mg/kg

SDG-sample delivery group
ID-identification
%-percent
J-estimated concentration
mg/kg-milligrams per kilogram

TABLE D-7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES (METALS)

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 11 of 12)

Laboratory SDG	Associated Sample ID	% Recovery	Control Limits	Associated Analyte	Sample		Units
					Results	Qualifier	
500-6332-1	JPL5-AP43(0.5)	29	75-125	Antimony	2	J	mg/kg
500-6332-1	JPL5-AP44(0.5)	29	75-125	Antimony	1.3	J J	mg/kg
500-6332-1	JPL5-AP45(0.5)	29	75-125	Antimony	6.3	J	mg/kg
500-6332-1	JPL5-AP46(0.5)	29	75-125	Antimony	1.4	J J	mg/kg
500-6332-1	JPL5-AF28(2)	66	75-125	Arsenic	13	J	mg/kg
500-6332-1	JPL5-AF29(2)	66	75-125	Arsenic	9.6	J	mg/kg
500-6332-1	JPL5-AP42(0.5)	66	75-125	Arsenic	17	J	mg/kg
500-6332-1	JPL5-AP43(0.5)	66	75-125	Arsenic	9.7	J	mg/kg
500-6332-1	JPL5-AP44(0.5)	66	75-125	Arsenic	12	J	mg/kg
500-6332-1	JPL5-AP45(0.5)	66	75-125	Arsenic	79	none	mg/kg
500-6332-1	JPL5-AP46(0.5)	66	75-125	Arsenic	9.8	J	mg/kg
500-6332-1	JPL5-AF28(2)	23	75-125	Cadmium	0.072	J J	mg/kg
500-6332-1	JPL5-AF29(2)	23	75-125	Cadmium	4.7	J	mg/kg
500-6332-1	JPL5-AP42(0.5)	23	75-125	Cadmium	11	J	mg/kg
500-6332-1	JPL5-AP43(0.5)	23	75-125	Cadmium	1.8	J	mg/kg
500-6332-1	JPL5-AP44(0.5)	23	75-125	Cadmium	5.5	J	mg/kg
500-6332-1	JPL5-AP45(0.5)	23	75-125	Cadmium	30	none	mg/kg
500-6332-1	JPL5-AP46(0.5)	23	75-125	Cadmium	3	J	mg/kg
500-6332-1	JPL5-AF28(2)	-2220	75-125	Copper	26	B J	mg/kg
500-6332-1	JPL5-AF29(2)	-2220	75-125	Copper	370	B none	mg/kg
500-6332-1	JPL5-AP42(0.5)	-2220	75-125	Copper	1000	none	mg/kg
500-6332-1	JPL5-AP43(0.5)	-2220	75-125	Copper	58	B J	mg/kg
500-6332-1	JPL5-AP44(0.5)	-2220	75-125	Copper	4600	B none	mg/kg
500-6332-1	JPL5-AP45(0.5)	-2220	75-125	Copper	5900	B none	mg/kg
500-6332-1	JPL5-AP46(0.5)	-2220	75-125	Copper	1900	B none	mg/kg
500-6332-1	JPL5-AF28(2)	-1450	75-125	Lead	16	J	mg/kg
500-6332-1	JPL5-AF29(2)	-1450	75-125	Lead	140	none	mg/kg
500-6332-1	JPL5-AP42(0.5)	-1450	75-125	Lead	300	none	mg/kg
500-6332-1	JPL5-AP43(0.5)	-1450	75-125	Lead	64	none	mg/kg
500-6332-1	JPL5-AP44(0.5)	-1450	75-125	Lead	4200	none	mg/kg
500-6332-1	JPL5-AP45(0.5)	-1450	75-125	Lead	520	none	mg/kg
500-6332-1	JPL5-AP46(0.5)	-1450	75-125	Lead	190	none	mg/kg
500-6332-1	JPL5-AF28(2)	-1100	75-125	Zinc	75	B none	mg/kg
500-6332-1	JPL5-AF29(2)	-1100	75-125	Zinc	180000	B none	mg/kg
500-6332-1	JPL5-AP42(0.5)	-1100	75-125	Zinc	2000	none	mg/kg
500-6332-1	JPL5-AP43(0.5)	-1100	75-125	Zinc	140	B J	mg/kg
500-6332-1	JPL5-AP44(0.5)	-1100	75-125	Zinc	2000	B none	mg/kg
500-6332-1	JPL5-AP45(0.5)	-1100	75-125	Zinc	4300	B none	mg/kg
500-6332-1	JPL5-AP46(0.5)	-1100	75-125	Zinc	2000	B none	mg/kg
500-6412-1	JPM4-AP60(0.5)	140	75-125	Lead	2600	none	mg/kg
500-6412-1	JPM4-AP61(0.5)	140	75-125	Lead	50	J	mg/kg
500-6412-1	JPM4-AP62(2)	140	75-125	Lead	34	J	mg/kg
500-6444-1	JPL5-AF31(3)	50	75-125	Arsenic	14	J	mg/kg
500-6444-1	JPL5-AP47(0.5)	50	75-125	Arsenic	11	J	mg/kg
500-6444-1	JPL5-AF31(3)	54	75-125	Copper	30	J	mg/kg
500-6444-1	JPL5-AP47(0.5)	54	75-125	Copper	260	none	mg/kg
500-6444-1	JPL5-AF31(3)	46	75-125	Lead	14	J	mg/kg
500-6444-1	JPL5-AP47(0.5)	46	75-125	Lead	120	none	mg/kg
500-6444-1	JPL5-AF31(3)	28	75-125	Zinc	71	B J	mg/kg

SDG-sample delivery group
ID-identification
%-percent
J-estimated concentration
mg/kg-milligrams per kilogram

TABLE D-7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES (METALS)

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 12 of 12)

Laboratory SDG	Associated Sample ID	% Recovery	Control Limits	Associated Analyte	Sample		Units
					Results	Qualifier	
500-6444-1	JPL5-AP47(0.5)	28	75-125	Zinc	490 B	none	mg/kg
500-7145-1	JPM4-POST-SB1-NW	68	75-125	Lead	19 J		mg/kg
500-7145-1	JPM4-POST-SB1-NE	68	75-125	Lead	20 J		mg/kg
500-7145-1	JPM4-POST-SB1-SW	68	75-125	Lead	19 J		mg/kg
500-7145-1	JPM4-POST-SB1-SE	68	75-125	Lead	35 J		mg/kg
500-14347	JPL5-RS-AP1(0.5)	35	75-125	Antimony	2.1 U	J	mg/kg
500-14347		405	75-125	Lead	19 B	J	mg/kg
500-14347	JPL5-RS-AP2(0.5)	35	75-125	Antimony	2.0 U	J	mg/kg
500-14347		405	75-125	Lead	13 B	J	mg/kg
500-14347	JPL5-RS-AP3(0.5)	35	75-125	Antimony	0.60 B	J	mg/kg
500-14347		405	75-125	Lead	14 B	J	mg/kg
500-14347	JPL5-RS-AP4(0.5)	35	75-125	Antimony	2.0 U	J	mg/kg
500-14347		405	75-125	Lead	14 B	J	mg/kg
500-14347	JPL5-RS-AP5(0.5)	35	75-125	Antimony	0.49 B	J	mg/kg
500-14347		405	75-125	Lead	15 B	J	mg/kg
500-14347	JPL5-RS-AP6(0.5)	35	75-125	Antimony	0.60 B	J	mg/kg
500-14347		405	75-125	Lead	15 B	J	mg/kg
500-14347	JPL5-RS-AP7(0.5)	35	75-125	Antimony	1.9 U	J	mg/kg
500-14347		405	75-125	Lead	14 B	J	mg/kg
500-14347	JPL5-RS-AP8(0.5)	35	75-125	Antimony	2.0 U	J	mg/kg
500-14347		405	75-125	Lead	13 B	J	mg/kg
500-14347	JPL5-RS-AP9(0.5)	35	75-125	Antimony	2.3 U	J	mg/kg
500-14347		405	75-125	Lead	13 B	J	mg/kg
500-14347	JPL5-RS-AP10(0.5)	35	75-125	Antimony	2.1 U	J	mg/kg
500-14347		405	75-125	Lead	14 B	J	mg/kg
500-14347	JPL5-RS-AP11(0.5)	35	75-125	Antimony	2.1 U	J	mg/kg
500-14347		405	75-125	Lead	19 B	J	mg/kg
500-14347	JPL5-RS-AP12(0.5)	35	75-125	Antimony	0.42 B	J	mg/kg
500-14347		405	75-125	Lead	16 B	J	mg/kg
500-14347	JPL5-RS-AF1(6)	28	75-125	Antimony	0.39 B	J	mg/kg
500-14347	JPL5-RS-AF2(6)	28	75-125	Antimony	2.3 U	J	mg/kg
500-14347	JPL5-RS-AF3(6)	28	75-125	Antimony	0.94 B	J	mg/kg
500-14347	JPL5-RS-AF4(6)	28	75-125	Antimony	0.43 B	J	mg/kg
500-14347	JPL5-RS-AF5(6)	28	75-125	Antimony	2.4 U	J	mg/kg
500-14347	JPL5-RS-AF6(6)	28	75-125	Antimony	2.2 U	J	mg/kg
500-14347	JPL5-RS-AF7(6)	28	75-125	Antimony	0.57 B	J	mg/kg
500-14347	JPL5-RS-AF8(6)	28	75-125	Antimony	0.69 B	J	mg/kg
500-14347	JPL5-RS-AF9(6)	28	75-125	Antimony	2.2 U	J	mg/kg

SDG-sample delivery group
ID-identification
%-percent
J-estimated concentration
mg/kg-milligrams per kilogram

TABLE D-8

Precision Results for Sample Duplicate Analysis - Metals (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 1 of 4)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPM3-OTF-AP19(1)	7/18/2006	247739	21			NS			NS			83			NS			NS			NS			NS			NS			NS		
JPM3-OTF-AP19(1)D	7/18/2006	247739	20			NS			NS			82			NS			NS			NS			NS			NS			NS		
			5			NA			NA			1			NA			NA			NA			NA			NA			NA		
JPM3-OTF-AP22(1)	7/18/2006	247739	56			NS			NS			97			NS			NS			NS			NS			NS			NS		
JPM3-OTF-AP22(1)D	7/18/2006	247739	45			NS			NS			83			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF20(2)	7/19/2006	247748	22			NA			NA			16			NA			NA			NA			NA			NA			NA		
JPM3-ITF-AF20(2)D	7/19/2006	247748	NS			NS			NS			320			NS			14			NS			NS			NS			NS		
			NA			NA			NA			9			NA			0			NA			NA			NA			NA		
JPM3-ITF-AF24(2)	7/19/2006	247748	NS			NS			NS			100			NS			13			NS			NS			NS			NS		
JPM3-ITF-AF24(2)D	7/19/2006	247748	NS			NS			NS			95			NS			13			NS			NS			NS			NS		
			NA			NA			NA			5			NA			0			NA			NA			NA			NA		
JPM3-ITF-AF119(2)	8/17/2006	248233	NS			0.0067	B		NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF119(2)-D	8/17/2006	248233	NS			0.021	B		NS			NS			NS			NS			NS			NS			NS			NS		
			NA			103			NA			NA			NA			NA			NA			NA			NA			NA		
JPM3-ITF-AP70(1)	8/23/2006	248301	NS			0.024	B		NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AP70(1)-D	8/23/2006	248301	NS			0.2			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			157			NA			NA			NA			NA			NA			NA			NA			NA		
JPM3-ITF-AF130(2)	8/21/2006	248307	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF130(2)-D	8/21/2006	248307	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPM3-ITF-AF153(2)	8/28/2006	248379	14			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF153(2)-D	8/28/2006	248379	15			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			7			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPM3-ITF-AF186(2)	10/3/2006	248981	14			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF186(2)-D	10/3/2006	248981	19			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			30			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPM3-ITF-AF195(2)	10/5/2006	249025	NS			0.22			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF195(2)-D	10/5/2006	249025	NS			0.15			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			38			NA			NA			NA			NA			NA			NA			NA			NA		
JPM3-ITF-AF221(2)	10/17/2006	249177	28			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPM3-ITF-AF221(2)-D	10/17/2006	249177	19			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			38			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPL2-AP98(0.5)	3/17/2007	250415	83			NS			NS			530			NS			9.7			NS			NS			12			NS		
JPL2-AP98(0.5)-D	3/17/2007	250415	54			NS			NS			340			NS			9.3			NS			NS			6.1			NS		
			42			NA			NA			44			NA			4			NA			NA			65			NA		
JPL2-AF47(2)	3/17/2007	250415	18			NS			NS			76			NS			12			NS			NS			0.23	U		NS		
JPL2-AF47(2)-D	3/17/2007	250415	19			NS			NS			NS			NS						NS			NS						NS		
			5			NA			NA			200			NA			200			NA			NA			200			NA		
JPL2-AP101(0.5)	3/26/2007	250429	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL2-AP101(0.5)-D	3/26/2007	250429	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPL2-AF51(3)	3/26/2007	250429	NS			NS			NS			150			NS			NS			NS			NS			NS			NS		
JPL2-AF51(3)-D	3/26/2007	250429	NS			NS			NS			140			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			7			NA			NA			NA			NA			NA			NA		
JPL2-AF53(2)	3/27/2007	250431	28			NS			NS			170			NS			13			NS			NS			2			NS		
JPL2-AF53(2)-D	3/27/2007	250431	20			NS			NS			88			NS			13			NS			NS			0.23	U		NS		
			33			NA			NA			64			NA			0			NA			NA			159			NA		
JPL23A-AP2(4)	4/5/2007	250472	11	J		NS			NS			57	J	2.4	U	J	9.5				NS			52			NS			18		
JPL23A-AP2(4)-D	4/5/2007	250472	12			NS			NS			55		0.52	B	J	8.7				NS			61			NS			19		
			9			NA			NA			4			129			9			NA			16			NA			5		
JPL23A-AP3(1)	4/5/2007	250472	54			NS			NS			140	J	2.5	B	J	11				NS			120			NS			24		
JPL23A-AP3(1)-D	4/5/2007	250472	46			NS			NS			130		1.8	B	J	11				NS			120			NS			31		
			16			NA			NA			7			33			0			NA			0			NA			25		

Res - Result
 LF - Lab Flag
 VF - Valadation Flag
 SDG - sample delivery group
 U - not detected
 mg/kg - milligrams per kilogram
 J - estimated concentration
 NS - not sampled
 B - blank contamination

TABLE D-8

Precision Results for Sample Duplicate Analysis - Metals (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 2 of 4)

Identification	Date Sampled	SDG	TCLP Chromium			Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPM3-OTF-AP19(1)	7/18/2006	247739	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-OTF-AP19(1)D	7/18/2006	247739	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA					
JPM3-OTF-AP22(1)	7/18/2006	247739	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-OTF-AP22(1)D	7/18/2006	247739	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA					
JPM3-ITF-AF20(2)	7/19/2006	247748	NS			30			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF20(2)D	7/19/2006	247748	NS			37			NS			NS			NS			NS			NS			NS			NS			NS					
			NA			21			NA			NA			NA			NA			NA			NA			NA			NA					
JPM3-ITF-AF24(2)	7/19/2006	247748	NS			28			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF24(2)D	7/19/2006	247748	NS			26			NS			NS			NS			NS			NS			NS			NS			NS					
			NA			7			NA			NA			NA			NA			NA			NA			NA			NA					
JPM3-ITF-AF119(2)	8/17/2006	248233	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF119(2)-D	8/17/2006	248233	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA					
JPM3-ITF-AP70(1)	8/23/2006	248301	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AP70(1)-D	8/23/2006	248301	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA					
JPM3-ITF-AF130(2)	8/21/2006	248307	NS			16			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF130(2)-D	8/21/2006	248307	NS			16			NS			NS			NS			NS			NS			NS			NS			NS					
			NA			0			NA			NA			NA			NA			NA			NA			NA			NA					
JPM3-ITF-AF153(2)	8/28/2006	248379	NS			21			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF153(2)-D	8/28/2006	248379	NS			22			NS			NS			NS			NS			NS			NS			NS			NS					
			NA			5			NA			NA			NA			NA			NA			NA			NA			NA					
JPM3-ITF-AF186(2)	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF186(2)-D	10/3/2006	248981	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA					
JPM3-ITF-AF195(2)	10/5/2006	249025	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF195(2)-D	10/5/2006	249025	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA					
JPM3-ITF-AF221(2)	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
JPM3-ITF-AF221(2)-D	10/17/2006	249177	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS					
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA					
JPL2-AP98(0.5)	3/17/2007	250415	NS			380			NS			4.1			NS			NS			NS			NS			NS			NS					
JPL2-AP98(0.5)-D	3/17/2007	250415	NS			210			NS			3			NS			NS			NS			NS			NS			NS					
			NA			58			NA			31			NA			NA			NA			NA			NA			NA					
JPL2-AF47(2)	3/17/2007	250415	NS			32			NS			0.19	B		NS			NS			NS			NS			NS			NS					
JPL2-AF47(2)-D	3/17/2007	250415	NS						NS						NS			NS			NS			NS			NS			NS					
			NA			200			NA			200			NA			NA			NA			NA			NA			NA					
JPL2-AP101(0.5)	3/26/2007	250429	NS			200			NS			NS			NS			NS			NS			NS			NS			NS					
JPL2-AP101(0.5)-D	3/26/2007	250429	NS			670			NS			NS			NS			NS			NS			NS			NS			NS					
			NA			108			NA			NA			NA			NA			NA			NA			NA			NA					
JPL2-AF51(3)	3/26/2007	250429	NS			79		J	NS			NS			NS			NS			NS			NS			NS			NS					
JPL2-AF51(3)-D	3/26/2007	250429	NS			100		J	NS			NS			NS			NS			NS			NS			NS			NS					
			NA			23			NA			NA			NA			NA			NA			NA			NA			NA					
JPL2-AF53(2)	3/27/2007	250431	NS			110			NS			0.27	B		NS			NS			NS			NS			NS			NS					
JPL2-AF53(2)-D	3/27/2007	250431	NS			46			NS			0.18	B		NS			NS			NS			NS			NS			NS					
			NA			82			NA			40			NA			NA			NA			NA			NA			NA					
JPL23A-AP2(4)	4/5/2007	250472	NS			24		J	NS			NS			11			NS			NS			NS			NS			NS					
JPL23A-AP2(4)-D	4/5/2007	250472	NS			24			NS			NS			33			NS			NS			NS			NS			NS					
			NA			0			NA			NA			100			NA			NA			NA			NA			NA					
JPL23A-AP3(1)	4/5/2007	250472	NS			34		J	NS			NS			24			NS			NS			NS			NS			NS					
JPL23A-AP3(1)-D	4/5/2007	250472	NS			46			NS			NS			24			NS			NS			NS			NS			NS					
			NA			30			NA			NA			0			NA			NA			NA			NA			NA					

Res - Result
 LF - Lab Flag
 VF - Validation Flag
 SDG - sample delivery group
 U - not detected
 mg/kg - milligrams per kilogram
 J - estimated concentration
 NS - not sampled
 B - blank contamination

TABLE D-8

Precision Results for Sample Duplicate Analysis - Metals (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 3 of 4)

Identification	Date Sampled	SDG	Lead			TCLP Lead			Mercury			Zinc			Antimony			Arsenic			TCLP Arsenic			Barium			Cadmium			Chromium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF
JPL23A-AP5(1)	4/6/2007	250479	15			NS			NS			51			2.2	U	5.2			NS			99			NS			21			
JPL23A-AF5(1)-D	4/6/2007	250479	14			NS			NS			52			2.5	U	5.2			NS			99			NS			22			
			7			NA			NA			2			13		0			NA			0			NA			5			
JPL23A-AP13(1)	4/16/2007	250504	29			NS			NS			100			1.1	B	15			NS			110			NS			23			
JPL23A-AP13(1)-D	4/16/2007	250504	76			NS			NS			130			2.6		12			NS			100			NS			29			
			90			NA			NA			26			81		22			NA			10			NA			23			
JPL23A-AF8(6)	4/23/2007	250534	13			NS			NS			60			0.45	B	NS			NS			51			NS			13			
JPL23A-AF8(6)-D	4/23/2007	250534	15			NS			NS			63			0.45	B	NS			NS			45			NS			14			
			14			NA			NA			5			0		NA			NA			13			NA			7			
JPL23-AP17(1)	4/20/2007	250541	NS			0.015	B		NS			NS			NS		NS			NS			NS			NS			NS			
JPL23-AP17(1)-D	4/20/2007	250541	NS			0.026	B		NS			NS			NS		NS			NS			NS			NS			NS			
			NA			54			NA			NA			NA		NA			NA			NA			NA			NA			
JPL2-AF57(2)	5/11/2007	250597	17			NS			NS			51			NS		9.3			NS			NS			0.069	B		NS			
JPL2-AF57(2)-D	5/11/2007	250597	17			NS			NS			56			NS		9			NS			NS			0.09	B		NS			
			0			NA			NA			9			NA		3			NA			NA			26			NA			
JPWR367-2W-4	6/7/2007	500-4599	27			NS			NS			NS			NS		NS			NS			NS			NS			NS			
JPWR367-2W-4-D	6/7/2007	500-4599	29			NS			NS			NS			NS		NS			NS			NS			NS			NS			
			7			NA			NA			NA			NA		NA			NA			NA			NA			NA			
JPWR367-2W-8	6/7/2007	500-4599	26			NS			NS			NS			NS		NS			NS			NS			NS			NS			
JPWR367-2W-8-D	6/7/2007	500-4599	22			NS			NS			NS			NS		NS			NS			NS			NS			NS			
			17			NA			NA			NA			NA		NA			NA			NA			NA			NA			
JPWR368-2E-9-D	6/7/2007	500-4602	35			NS			NS			NS			NS		NS			NS			NS			NS			NS			
JPWR368-2E-12-D	6/7/2007	500-4602	110			NS			NS			NS			NS		NS			NS			NS			NS			NS			
			103			NA			NA			NA			NA		NA			NA			NA			NA			NA			
JPWR-369-1W-5	6/11/2007	500-4661	17		J	NS			NS			NS			NS		NS			NS			NS			NS			NS			
JPWR-369-1W-5-D	6/11/2007	500-4661	15		J	NS			NS			NS			NS		NS			NS			NS			NS			NS			
			13			NA			NA			NA			NA		NA			NA			NA			NA			NA			
JPWR-369-1W-14	6/11/2007	500-4661	22		J	NS			NS			NS			NS		NS			NS			NS			NS			NS			
JPWR-369-1W-14-D	6/11/2007	500-4661	18		J	NS			NS			NS			NS		NS			NS			NS			NS			NS			
			20			NA			NA			NA			NA		NA			NA			NA			NA			NA			
JPWR370-1E-13	6/11/2007	500-4662	12		J	NS			NS			NS			NS		NS			NS			NS			NS			NS			
JPWR370-1E-13-D	6/11/2007	500-4662	20		J	NS			NS			NS			NS		NS			NS			NS			NS			NS			
			50			NA			NA			NA			NA		NA			NA			NA			NA			NA			
JPWR370-1E-15	6/11/2007	500-4662	27		J	NS			NS			NS			NS		NS			NS			NS			NS			NS			
JPWR370-1E-15-D	6/11/2007	500-4662	16		J	NS			NS			NS			NS		NS			NS			NS			NS			NS			
			51			NA			NA			NA			NA		NA			NA			NA			NA			NA			
JPL5-AF3(1)	6/12/2007	500-4685	15			NS			NS			61	B		NS		NS			NS			NS			NS			NS			
JPL5-AF3(1)-D	6/12/2007	500-4685	13			NS			NS			60	B		NS		NS			NS			NS			NS			NS			
			14			NA			NA			2			NA		NA			NA			NA			NA			NA			
JPL5-AP9(0.5)	6/21/2007	500-4870	24			NS			NS			NS			NS		NS			NS			NS			NS			NS			
JPL5-AP9(0.5)-D	6/21/2007	500-4870	25			NS			NS			NS			NS		NS			NS			NS			NS			NS			
			4			NA			NA			NA			NA		NA			NA			NA			NA			NA			
JPL5-13(D)	6/22/2007	500-4954	81	B		NS			NS			NS			NS		NS			NS			NS			NS			NS			
JPL5-10(3)-D	6/22/2007	500-4954	15	B		NS			NS			NS			NS		NS			NS			NS			NS			NS			
			138			NA			NA			NA			NA		NA			NA			NA			NA			NA			
JPL5-AF20(3)	7/23/2007	500-5501	13			NS			NS			63	B		0.84	J	J	8.6		NS			NS			0.29			NS			
JPL5-AF20(3)-D	7/23/2007	500-5501	14			NS			NS			63	B		0.64	J	J	11		NS			NS			0.37			NS			
			7			NA			NA			0			27		24			NA			NA			24			NA			
JPL5-AF21(3)	7/23/2007	500-5501	20			NS			NS			43	B		1.3	J	J	74		NS			NS			0.55			NS			
JPL5-AF21(3)-D	7/23/2007	500-5501	14			NS			NS			40	B		1.7	U	R	17		NS			NS			0.23			NS			
			35			NA			NA			7			27		125			NA			NA			82			NA			
JPM4-AP30(2)	8/3/2007	500-5767	99	B		1.5	B		NS			NS			NS		NS			NS			NS			NS			NS			
JPM4-AP30(2)-D	8/3/2007	500-5767	100	B		0.075	B		NS			NS			NS		NS			NS			NS			NS			NS			
			1			181			NA			NA			NA		NA			NA			NA			NA			NA			

Res - Result
 LF - Lab Flag
 VF - Valadation Flag
 SDG - sample delivery group
 U - not detected
 mg/kg - milligrams per kilogram
 J - estimated concentration
 NS - not sampled
 B - blank contamination

TABLE D-8

Precision Results for Sample Duplicate Analysis - Metals (mg/kg)

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 4 of 4)

Identification	Date Sampled	SDG	TCLP Chromium			Copper			Selenium			Silver			Nickel			Calcium			Iron			Magnesium			Potassium			Sodium			Thallium		
			Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF	Res	LF	VF			
JPL23A-AP5(1)	4/6/2007	250479	NS			19			NS			NS			16			NS			NS			NS			NS			NS			NS		
JPL23A-AF5(1)-D	4/6/2007	250479	NS			19			NS			NS			16			NS			NS			NS			NS			NS			NS		
			NA			0			NA			NA			0			NA			NA			NA			NA			NA			NA		
JPL23A-AP13(1)	4/16/2007	250504	NS			35			NS			NS			38			NS			NS			NS			NS			NS			NS		
JPL23A-AP13(1)-D	4/16/2007	250504	NS			34			NS			NS			34			NS			NS			NS			NS			NS			NS		
			NA			3			NA			NA			11			NA			NA			NA			NA			NA			NA		
JPL23A-AF8(6)	4/23/2007	250534	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL23A-AF8(6)-D	4/23/2007	250534	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPL23-AP17(1)	4/20/2007	250541	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL23-AP17(1)-D	4/20/2007	250541	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPL2-AF57(2)	5/11/2007	250597	NS			19			NS			0.18	B		NS			NS			NS			NS			NS			NS			NS		
JPL2-AF57(2)-D	5/11/2007	250597	NS			32			NS			0.58	U	UB	NS			NS			NS			NS			NS			NS			NS		
			NA			51			NA			105			NA			NA			NA			NA			NA			NA			NA		
JPWR367-2W-4	6/7/2007	500-4599	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-4-D	6/7/2007	500-4599	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPWR367-2W-8	6/7/2007	500-4599	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR367-2W-8-D	6/7/2007	500-4599	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPWR368-2E-9-D	6/7/2007	500-4602	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR368-2E-12-D	6/7/2007	500-4602	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPWR-369-1W-5	6/11/2007	500-4661	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-5-D	6/11/2007	500-4661	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPWR-369-1W-14	6/11/2007	500-4661	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR-369-1W-14-D	6/11/2007	500-4661	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPWR370-1E-13	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-13-D	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPWR370-1E-15	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPWR370-1E-15-D	6/11/2007	500-4662	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPL5-AF3(1)	6/12/2007	500-4685	NS			20			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AF3(1)-D	6/12/2007	500-4685	NS			19			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			5			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPL5-AP9(0.5)	6/21/2007	500-4870	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-AP9(0.5)-D	6/21/2007	500-4870	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPL5-13(D)	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
JPL5-10(3)-D	6/22/2007	500-4954	NS			NS			NS			NS			NS			NS			NS			NS			NS			NS			NS		
			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA			NA		
JPL5-AF20(3)	7/23/2007	500-5501	NS			25			NS			0.52	U		NS			NS			NS			NS			NS			NS			NS		1.5
JPL5-AF20(3)-D	7/23/2007	500-5501	NS			27			NS			0.51	U		NS			NS			NS			NS			NS			NS			NS		1.4
			NA			8			NA			2			NA			NA			NA			NA			NA			NA			NA		7
JPL5-AF21(3)	7/23/2007	500-5501	NS			30			NS			0.11	J		NS			NS			NS			NS			NS			NS			NS		0.69
JPL5-AF21(3)-D	7/23/2007	500-5501	NS			19			NS			0.43	U		NS			NS			NS			NS			NS			NS			NS		0.73
			NA			45			NA			119			NA			NA			NA			NA			NA			NA			NA		6
JPM4-AP30(2)	8/3/2007	500-5767	NS			NS																													

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

(Page 1 of 20)

Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
248926	Initial Calibration	Lead	JPM3 ITF-AF171	0.00329	mg/kg	170	none	mg/kg
248307	Method	Copper	JPM3 ITF-AF130(2)	0.39	mg/kg	16	none	mg/kg
248307	Method	Copper	JPM3 ITF-AF133(2)	0.39	mg/kg	30	none	mg/kg
248307	Method	Copper	JPM3 ITF-AF130(2)-D	0.39	mg/kg	16	none	mg/kg
249025	Method	Barium	JPM3-ITF-AF197(2)	0.08	mg/kg	130	none	mg/kg
249025	Continuing Calibration	Thallium	JPM3-ITF-AF197(2)	0.00768	mg/kg	1.2	none	mg/kg
249049	Method	Lead	JPM4-CP19	0.26	mg/kg	47	none	mg/kg
249049	Method	Lead	JPM4-CP20	0.26	mg/kg	100	none	mg/kg
249049	Method	Lead	JPM4-CP21	0.26	mg/kg	42	none	mg/kg
249049	Method	Lead	JPM4-CP22	0.26	mg/kg	83	none	mg/kg
249049	Method	Lead	JPM4-CP23	0.26	mg/kg	87	none	mg/kg
249049	Method	Lead	JPM4-CP24	0.26	mg/kg	53	none	mg/kg
249049	Method	Lead	JPM4-CP25	0.26	mg/kg	39	none	mg/kg
249049	Method	Lead	JPM4-CP26	0.26	mg/kg	24	none	mg/kg
249049	Method	Lead	JPM4-CP27	0.26	mg/kg	27	none	mg/kg
249049	Method	Lead	JPM4-CP28	0.26	mg/kg	860	none	mg/kg
249049	Method	Lead	JPM4-CP29	0.26	mg/kg	450	none	mg/kg
249049	Method	Lead	JPM4-CP30	0.26	mg/kg	480	none	mg/kg
249049	Method	Lead	JPM4-CP31	0.26	mg/kg	170	none	mg/kg
249049	Method	Lead	JPM4-CP32	0.26	mg/kg	33	none	mg/kg
249049	Method	Lead	JPM4-CP33	0.26	mg/kg	28	none	mg/kg
249220	Method	Lead	JPM4-CP4(1)	0.28	mg/kg	500	none	mg/kg
249220	Method	Lead	JPM4-CP4(2)	0.28	mg/kg	350	none	mg/kg
249220	Method	Lead	JPM4-CP4(3)	0.28	mg/kg	24	none	mg/kg
249220	Method	Lead	JPM4-CP5(1)	0.28	mg/kg	92	none	mg/kg
249220	Method	Lead	JPM4-CP5(2)	0.28	mg/kg	29	none	mg/kg
249220	Method	Lead	JPM4-CP5(3)	0.28	mg/kg	15	none	mg/kg
249220	Method	Lead	JPM4-CP6(1)	0.28	mg/kg	56	none	mg/kg
249220	Method	Lead	JPM4-CP6(2)	0.28	mg/kg	20	none	mg/kg
249220	Method	Lead	JPM4-CP6(3)	0.28	mg/kg	17	none	mg/kg
249221	Method	Lead	JPM4-CP31(.5)	0.28	mg/kg	27	none	mg/kg
249221	Method	Lead	JPM4-CP32(.5)	0.28	mg/kg	29	none	mg/kg
249221	Method	Lead	JPM4-CP33(.5)	0.28	mg/kg	27	none	mg/kg
249240	Method	Lead	JPM3-ITF-AF231(2)	0.28	mg/kg	150	none	mg/kg
249240	Method	Lead	JPM3-ITF-AF233(2)	0.28	mg/kg	20	none	mg/kg
249398	Method	Copper	JPM3-ITF-CP1-10(1)	0.23	mg/kg	48	none	mg/kg
249398	Method	Copper	JPM3-ITF-CP1-11(1)	0.23	mg/kg	110	none	mg/kg
249398	Method	Copper	JPM3-ITF-CP1-14(1)	0.23	mg/kg	190	none	mg/kg
249398	Method	Copper	JPM3-ITF-CP1-15(1)	0.23	mg/kg	290	none	mg/kg
249398	Continuing Calibration	Arsenic	JPM3-ITF-CP1-10(1)	0.00223	mg/kg	67	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

(Page 2 of 20)

Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
249398	Continuing Calibration	Arsenic	JPM3-ITF-CP1-11(1)	0.00223	mg/kg	23	none	mg/kg
249398	Continuing Calibration	Arsenic	JPM3-ITF-CP1-14(1)	0.00223	mg/kg	21	none	mg/kg
249398	Continuing Calibration	Arsenic	JPM3-ITF-CP1-15(1)	0.00223	mg/kg	27	none	mg/kg
249398	Continuing Calibration	Cadmium	JPM3-ITF-CP1-10(1)	0.00055	mg/kg	0.77	none	mg/kg
249398	Continuing Calibration	Cadmium	JPM3-ITF-CP1-11(1)	0.00055	mg/kg	1.5	none	mg/kg
249398	Continuing Calibration	Cadmium	JPM3-ITF-CP1-14(1)	0.00055	mg/kg	1.6	none	mg/kg
249398	Continuing Calibration	Cadmium	JPM3-ITF-CP1-15(1)	0.00055	mg/kg	2.2	none	mg/kg
249398	Continuing Calibration	Lead	JPM3-ITF-CP1-15(1)	0.00536	mg/L	8.6	none	mg/L
249398	Continuing Calibration	Lead	JPM3-ITF-CP1-16(1)	0.00536	mg/L	140	none	mg/L
249398	Continuing Calibration	Lead	JPM3-ITF-CP1-17(1)	0.00536	mg/L	1.8	none	mg/L
249398	Continuing Calibration	Lead	JPM3-ITF-CP1-18(1)	0.00536	mg/L	0.64	none	mg/L
249398	Continuing Calibration	Lead	JPM3-ITF-CP1-19(1)	0.00536	mg/L	0.035	B B	mg/L
249398	Continuing Calibration	Lead	JPM3-ITF-CP1-20(1)	0.00536	mg/L	0.068	none	mg/L
249398	Continuing Calibration	Lead	JPM3-ITF-CP1-21(1)	0.00536	mg/L	0.017	B B	mg/L
249399	Continuing Calibration	Lead	JPM3-ITF-AF236(2)	0.00461	mg/L	0.0053	B B	mg/kg
249623	Initial Calibration	Lead	JPM12-AP45(1)	0.00286	mg/L	120	none	mg/kg
249623	Initial Calibration	Lead	JPM12-AP46(1)	0.00286	mg/L	1300	none	mg/kg
249623	Initial Calibration	Lead	JPM12-AP47(1)	0.00286	mg/L	46	none	mg/kg
249623	Initial Calibration	Lead	JPM12-AP48(1)	0.00286	mg/L	300	none	mg/kg
249623	Initial Calibration	Lead	JPM12-AP49(1)	0.00286	mg/L	44	none	mg/kg
249623	Initial Calibration	Lead	JPM12-AP50(1)	0.00286	mg/L	49	none	mg/kg
249623	Initial Calibration	Lead	JPM12-AP51(1)	0.00286	mg/L	35	none	mg/kg
249623	Initial Calibration	Lead	JPM12-AP52(1)	0.00286	mg/L	38	none	mg/kg
249623	Initial Calibration	Lead	JPM12-AP53(1)	0.00286	mg/L	28	none	mg/kg
249623	Initial Calibration	Lead	JPM12-AP54(1)	0.00286	mg/L	41	none	mg/kg
249623	Initial Calibration	Lead	JPM12-AP45(1)	0.0092	mg/L	0.4	none	mg/L
249623	Initial Calibration	Lead	JPM12-AP46(1)	0.0092	mg/L	2.7	none	mg/L
249623	Initial Calibration	Lead	JPM12-AP47(1)	0.0092	mg/L	0.04	B B	mg/L
249623	Initial Calibration	Lead	JPM12-AP48(1)	0.0092	mg/L	0.04	B B	mg/L
249623	Initial Calibration	Lead	JPM12-AP49(1)	0.0092	mg/L	0.0071	B B	mg/L
249623	Initial Calibration	Lead	JPM12-AP50(1)	0.0092	mg/L	0.050	U UB	mg/L
249623	Initial Calibration	Lead	JPM12-AP51(1)	0.0092	mg/L	0.050	U UB	mg/L
249623	Initial Calibration	Lead	JPM12-AP52(1)	0.0092	mg/L	0.050	U UB	mg/L
249623	Initial Calibration	Lead	JPM12-AP53(1)	0.0092	mg/L	0.050	U UB	mg/L
249623	Initial Calibration	Lead	JPM12-AP54(1)	0.0092	mg/L	0.050	U UB	mg/L
249743	Initial Calibration	Lead	JPM12-AP76(1)	0.00303 B	mg/L	560	none	mg/kg
249743	Initial Calibration	Lead	JPM12-AP81(1)	0.00303 B	mg/L	1700	none	mg/kg
249743	Initial Calibration	Lead	JPM12-AP82(1)	0.00303 B	mg/L	20	none	mg/kg
249743	Initial Calibration	Lead	JPM12-AP83(1)	0.00303 B	mg/L	35	none	mg/kg
249777	Initial Calibration	Lead	JPM4-AF5(2)	0.00263 B	mg/L	9300	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
249777	Initial Calibration	Lead	JPM4-AP1(1)	0.00263 B	mg/L	180000	none	mg/kg
249777	Method	Lead	JPM4-AP4(1)	0.30 B	mg/kg	170	none	mg/kg
249777	Method	Lead	JPM4-AP5(1)	0.30 B	mg/kg	20	none	mg/kg
249777	Method	Lead	JPM4-AP6(1)	0.30 B	mg/kg	900	none	mg/kg
249777	Method	Lead	JPM4-AP7(1)	0.30 B	mg/kg	320	none	mg/kg
249777	Method	Lead	JPM4-AP8(1)	0.30 B	mg/kg	360	none	mg/kg
249777	Method	Lead	JPM4-AP9(1)	0.30 B	mg/kg	410	none	mg/kg
249777	Method	Lead	JPM4-AP10(1)	0.30 B	mg/kg	33	none	mg/kg
249777	Method	Lead	JPM4-AF4(2)	0.30 B	mg/kg	1200	none	mg/kg
249777	Method	Lead	JPM4-AF6(2)	0.30 B	mg/kg	2300	none	mg/kg
249944	Method	Copper	JPM3-ITF-AF251(3)	0.29 B	mg/kg	16	none	mg/kg
249944	Method	Copper	JPM3-ITF-AF253(3)	0.29 B	mg/kg	57	none	mg/kg
249944	Initial Calibration	Cadmium	JPM3-ITF-AF251(3)	0.00067	mg/kg	0.20	B none	mg/L
249944	Initial Calibration	Cadmium	JPM3-ITF-AF253(3)	0.00067	mg/kg	0.44	none	mg/L
249944	Continuing Calibration	Cadmium	JPM3-ITF-AF251(3)	0.00059 B	mg/L	0.20	B none	mg/L
249944	Continuing Calibration	Cadmium	JPM3-ITF-AF253(3)	0.00059 B	mg/L	0.44	none	mg/L
249944	Continuing Calibration	Cadmium	JPM3-ITF-AF251(3)	0.00041 B	mg/L	0.20	B none	mg/L
249944	Continuing Calibration	Cadmium	JPM3-ITF-AF253(3)	0.00041 B	mg/L	0.44	none	mg/L
250051	Initial Calibration	Silver	JPL3-CP10(1)	0.00105	mg/L	45	none	mg/kg
250051	Initial Calibration	Silver	JPL3-CP11(1)	0.00105	mg/L	360	none	mg/kg
250051	Initial Calibration	Silver	JPL3-CP12(1)	0.00105	mg/L	16	none	mg/kg
250051	Initial Calibration	Silver	JPL3-CP13(1)	0.00105	mg/L	58	none	mg/kg
250051	Initial Calibration	Silver	JPL3-CP14(1)	0.00105	mg/L	27	none	mg/kg
250051	Initial Calibration	Silver	JPL3-CP15(1)	0.00105	mg/L	13	none	mg/kg
250051	Initial Calibration	Silver	JPL3-CP16(1)	0.00105	mg/L	0.47	B none	mg/kg
250051	Initial Calibration	Silver	JPL3-CP17(1)	0.00105	mg/L	62	none	mg/kg
250051	Initial Calibration	Silver	JPL3-CP18(1)	0.00105	mg/L	27	none	mg/kg
250051	Initial Calibration	Silver	JPL3-CP19(1)	0.00105	mg/L	13	none	mg/kg
250051	Initial Calibration	Silver	JPL3-CP20(1)	0.00105	mg/L	190	none	mg/kg
250051	Initial Calibration	Silver	JPL3-CP21(1)	0.00105	mg/L	3.6	none	mg/kg
250051	Continuing Calibration	Chromium	JPL3-CP1(1)	0.00179	mg/L	19	none	mg/kg
250051	Continuing Calibration	Chromium	JPL3-CP2(1)	0.00179	mg/L	19	none	mg/kg
250051	Continuing Calibration	Chromium	JPL3-CP3(1)	0.00179	mg/L	20	none	mg/kg
250051	Continuing Calibration	Chromium	JPL3-CP4(1)	0.00179	mg/L	18	none	mg/kg
250051	Continuing Calibration	Chromium	JPL3-CP5(1)	0.00179	mg/L	21	none	mg/kg
250051	Continuing Calibration	Chromium	JPL3-CP6(1)	0.00179	mg/L	16	none	mg/kg
250051	Continuing Calibration	Chromium	JPL3-CP7(1)	0.00179	mg/L	12	none	mg/kg
250051	Continuing Calibration	Chromium	JPL3-CP8(1)	0.00179	mg/L	17	none	mg/kg
250051	Continuing Calibration	Chromium	JPL3-CP9(1)	0.00179	mg/L	17	none	mg/kg
250051	Method	Chromium	JPL3-CP1(1)	0.24	mg/kg	19	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
250051	Method	Chromium	JPL3-CP2(1)	0.24	mg/kg	19	none	mg/kg
250051	Method	Chromium	JPL3-CP3(1)	0.24	mg/kg	20	none	mg/kg
250051	Method	Chromium	JPL3-CP4(1)	0.24	mg/kg	18	none	mg/kg
250051	Method	Chromium	JPL3-CP5(1)	0.24	mg/kg	21	none	mg/kg
250051	Method	Chromium	JPL3-CP6(1)	0.24	mg/kg	16	none	mg/kg
250051	Method	Chromium	JPL3-CP7(1)	0.24	mg/kg	12	none	mg/kg
250051	Method	Chromium	JPL3-CP8(1)	0.24	mg/kg	17	none	mg/kg
250051	Method	Chromium	JPL3-CP9(1)	0.24	mg/kg	17	none	mg/kg
250051	Method	Silver	JPL3-CP10(1)	0.15	mg/kg	45	none	mg/kg
250051	Method	Copper	JPL3-CP11(1)	0.15	mg/kg	1600	none	mg/kg
250051	Method	Copper	JPL3-CP12(1)	0.37	mg/kg	450	none	mg/kg
250051	Method	Copper	JPL3-CP13(1)	0.37	mg/kg	510	none	mg/kg
250051	Method	Copper	JPL3-CP14(1)	0.37	mg/kg	350	none	mg/kg
250051	Method	Copper	JPL3-CP15(1)	0.37	mg/kg	210	none	mg/kg
250051	Method	Copper	JPL3-CP16(1)	0.37	mg/kg	30	none	mg/kg
250051	Method	Copper	JPL3-CP17(1)	0.37	mg/kg	650	none	mg/kg
250051	Method	Copper	JPL3-CP18(1)	0.37	mg/kg	430	none	mg/kg
250051	Method	Copper	JPL3-CP19(1)	0.37	mg/kg	150	none	mg/kg
250051	Method	Copper	JPL3-CP20(1)	0.37	mg/kg	600	none	mg/kg
250051	Method	Copper	JPL3-CP21(1)	0.37	mg/kg	33	none	mg/kg
250224	Initial Calibration	Lead	JPM3-ITF-AF49B(1)	0.00303	mg/L	37	none	mg/kg
250224	Initial Calibration	Barium	JPM3-ITF-AF205B(1)	0.00058	mg/L	110	none	mg/kg
250224	Initial Calibration	Barium	JPM3-ITF-AF215B(1)	0.00058	mg/L	180	none	mg/kg
250224	Continuing Calibration	Barium	JPM3-ITF-AF205B(1)	0.00047	mg/L	110	none	mg/kg
250224	Continuing Calibration	Barium	JPM3-ITF-AF215B(1)	0.00047	mg/L	180	none	mg/kg
250224	Continuing Calibration	Barium	JPM3-ITF-AF205B(1)	0.00035	mg/L	110	none	mg/kg
250224	Continuing Calibration	Barium	JPM3-ITF-AF215B(1)	0.00035	mg/L	180	none	mg/kg
250273	Method	Lead	JPL2-TOTAL METAL-(PROFILE)	0.56	mg/L	500	none	mg/kg
250273	Initial Calibration	Lead	JPL2-TOTAL METAL-(PROFILE)	0.00301	mg/L	500	none	mg/kg
250399	Method	Copper	JPL2-AP97(0.5)	0.36	mg/kg	34	none	mg/kg
250399	Method	Copper	JPL2-AF44(2)	0.36	mg/kg	81	none	mg/kg
250399	Method	Copper	JPL2-AF45(2)	0.36	mg/kg	87	none	mg/kg
250431	Initial Calibration	Lead	JPL2-AP103(0.5)	0.00273	mg/L	19	none	mg/kg
250431	Initial Calibration	Silver	JPL2-AP103(0.5)	0.00102	mg/L	0.14	B none	mg/kg
250431	Initial Calibration	Lead	JPL2-AP104(0.5)	0.00273	mg/L	13	none	mg/kg
250431	Initial Calibration	Silver	JPL2-AP104(0.5)	0.00102	mg/L	0.61	U UB	
250431	Initial Calibration	Lead	JPL2-AF52(2)	0.00273	mg/L	20	none	mg/kg
250431	Initial Calibration	Silver	JPL2-AF52(2)	0.00102	mg/L	0.19	B none	mg/kg
250431	Initial Calibration	Lead	JPL2-AF53(2)	0.00273	mg/L	28	none	mg/kg
250431	Initial Calibration	Silver	JPL2-AF53(2)	0.00102	mg/L	0.27	B none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
250431	Initial Calibration	Lead	JPL2-AF53(2)-D	0.00273	mg/L	20	none	mg/kg
250431	Initial Calibration	Silver	JPL2-AF53(2)-D	0.00102	mg/L	0.18	B none	mg/kg
250431	Continuing Calibration	Silver	JPL2-AP103(0.5)	0.00097	mg/L	0.14	B none	mg/kg
250431	Continuing Calibration	Silver	JPL2-AP104(0.5)	0.00097	mg/L	0.61	U none	mg/kg
250431	Continuing Calibration	Silver	JPL2-AF52(2)	0.00097	mg/L	0.19	B none	mg/kg
250431	Continuing Calibration	Silver	JPL2-AF53(2)	0.00097	mg/L	0.27	B none	mg/kg
250443	Method	Copper	JPL2-AP105(0.5)	0.37	mg/kg	31	none	mg/kg
250443	Method	Copper	JPL2-AP106(0.5)	0.37	mg/kg	18	none	mg/kg
250443	Method	Copper	JPL2-AP107(0.5)	0.37	mg/kg	680	none	mg/kg
250443	Method	Copper	JPL2-AP108(0.5)	0.37	mg/kg	21	none	mg/kg
250443	Method	Copper	JPL2-AF54(2)	0.37	mg/kg	30	none	mg/kg
250443	Method	Copper	JPL2-AF55(2)	0.37	mg/kg	36	none	mg/kg
250443	Method	Copper	JPL2-AF56(2)	0.37	mg/kg	17	none	mg/kg
250472	Method	Chromium	JPL23A-AF1(6)	0.13	mg/kg	18	none	mg/kg
250472	Method	Chromium	JPL23A-AP1(1)	0.13	mg/kg	19	none	mg/kg
250472	Method	Chromium	JPL23A-AP2(4)	0.13	mg/kg	18	none	mg/kg
250472	Method	Chromium	JPL23A-AP3(1)	0.13	mg/kg	24	none	mg/kg
250472	Method	Chromium	JPL23A-AP4(4)	0.13	mg/kg	18	none	mg/kg
250472	Method	Chromium	JPL23A-AP2(4)-D	0.13	mg/kg	19	none	mg/kg
250472	Method	Chromium	JPL23A-AP3(1)-D	0.13	mg/kg	24	none	mg/kg
250473	Method	Chromium	JPL23A-WATER	0.00151	mg/L	0.083	none	mg/L
250473	Continuing Calibration	Barium	JPL23A-WATER	0.00063	mg/L	0.39	none	mg/L
250479	Method	Copper	JPL23A-AP5(1)	0.28	mg/kg	19	none	mg/kg
250479	Method	Copper	JPL23A-AP6(4)	0.28	mg/kg	19	none	mg/kg
250479	Method	Copper	JPL23A-AF2(6)	0.28	mg/kg	23	none	mg/kg
250479	Method	Copper	JPL23A-AP5(1)-D	0.28	mg/kg	25	none	mg/kg
250479	Initial Calibration	Arsenic	JPL23A-AP5(1)	0.00266	mg/kg	5.2	none	mg/kg
250479	Initial Calibration	Arsenic	JPL23A-AP6(4)	0.00266	mg/kg	16	none	mg/kg
250479	Initial Calibration	Arsenic	JPL23A-AF2(6)	0.00266	mg/kg	10	none	mg/kg
250479	Initial Calibration	Arsenic	JPL23A-AP5(1)-D	0.00266	mg/kg	5.2	none	mg/kg
250479	Initial Calibration	Barium	JPL23A-AP5(1)	0.00042	mg/kg	99	none	mg/kg
250479	Initial Calibration	Barium	JPL23A-AP6(4)	0.00042	mg/kg	58	none	mg/kg
250479	Initial Calibration	Barium	JPL23A-AF2(6)	0.00042	mg/kg	51	none	mg/kg
250479	Initial Calibration	Barium	JPL23A-AP5(1)-D	0.00042	mg/kg	99	none	mg/kg
250479	Initial Calibration	Nickel	JPL23A-AP5(1)	0.00183	mg/kg	16	none	mg/kg
250479	Initial Calibration	Nickel	JPL23A-AP6(4)	0.00183	mg/kg	26	none	mg/kg
250479	Initial Calibration	Nickel	JPL23A-AF2(6)	0.00183	mg/kg	28	none	mg/kg
250479	Initial Calibration	Nickel	JPL23A-AP5(1)-D	0.00183	mg/kg	16	none	mg/kg
250479	Continuing Calibration	Arsenic	JPL23A-AP5(1)	0.00365	mg/kg	5.2	none	mg/kg
250479	Continuing Calibration	Arsenic	JPL23A-AP6(4)	0.00365	mg/kg	16	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
250479	Continuing Calibration	Arsenic	JPL23A-AF2(6)	0.00365	mg/kg	10	none	mg/kg
250479	Continuing Calibration	Arsenic	JPL23A-AP5(1)-D	0.00365	mg/kg	5.2	none	mg/kg
250479	Continuing Calibration	Barium	JPL23A-AP5(1)	0.00033	mg/kg	99	none	mg/kg
250479	Continuing Calibration	Barium	JPL23A-AP6(4)	0.00033	mg/kg	58	none	mg/kg
250479	Continuing Calibration	Barium	JPL23A-AF2(6)	0.00033	mg/kg	51	none	mg/kg
250479	Continuing Calibration	Barium	JPL23A-AP5(1)-D	0.00033	mg/kg	99	none	mg/kg
250479	Continuing Calibration	Copper	JPL23A-AP5(1)	0.00213	mg/kg	19	none	mg/kg
250479	Continuing Calibration	Copper	JPL23A-AP6(4)	0.00213	mg/kg	19	none	mg/kg
250479	Continuing Calibration	Copper	JPL23A-AF2(6)	0.00213	mg/kg	23	none	mg/kg
250479	Continuing Calibration	Copper	JPL23A-AP5(1)-D	0.00213	mg/kg	25	none	mg/kg
250523	Method	Barium	JPL23A-AP15(1)	0.26	mg/kg	14	none	mg/kg
250523	Method	Barium	JPL23A-AP16(1)	0.26	mg/kg	13	none	mg/kg
250523	Method	Barium	JPL23A-AP17(1)	0.26	mg/kg	190	none	mg/kg
250523	Method	Barium	JPL23A-AP18(1)	0.26	mg/kg	19	none	mg/kg
250523	Method	Barium	JPL23A-AP19(1)	0.26	mg/kg	20	none	mg/kg
250523	Method	Barium	JPL23A-AP20(1)	0.26	mg/kg	14	none	mg/kg
250523	Method	Barium	JPL23A-AF5(6)	0.26	mg/kg	11	none	mg/kg
250523	Method	Barium	JPL23A-AF6(6)	0.26	mg/kg	12	none	mg/kg
250523	Method	Barium	JPL23A-AF7(6)	0.26	mg/kg	30	none	mg/kg
250523	Method	Barium	JPL23A-AP17(1)-D	0.26	mg/kg	180	none	mg/kg
250523	Initial Calibration	Barium	JPL23A-AP15(1)	0.00053	mg/L	70	none	mg/kg
250523	Initial Calibration	Barium	JPL23A-AP16(1)	0.00053	mg/L	44	none	mg/kg
250523	Initial Calibration	Barium	JPL23A-AP17(1)	0.00053	mg/L	200	none	mg/kg
250523	Initial Calibration	Barium	JPL23A-AP18(1)	0.00053	mg/L	55	none	mg/kg
250523	Initial Calibration	Barium	JPL23A-AP19(1)	0.00053	mg/L	160	none	mg/kg
250523	Initial Calibration	Barium	JPL23A-AP20(1)	0.00053	mg/L	77	none	mg/kg
250523	Initial Calibration	Barium	JPL23A-AF5(6)	0.00053	mg/L	47	none	mg/kg
250523	Initial Calibration	Barium	JPL23A-AF6(6)	0.00053	mg/L	55	none	mg/kg
250523	Initial Calibration	Barium	JPL23A-AF7(6)	0.00053	mg/L	70	none	mg/kg
250523	Initial Calibration	Barium	JPL23A-AP17(1)-D	0.00053	mg/L	150	none	mg/kg
250523	Continuing Calibration	Barium	JPL23A-AP15(1)	0.0005	mg/L	70	none	mg/kg
250523	Continuing Calibration	Barium	JPL23A-AP16(1)	0.0005	mg/L	44	none	mg/kg
250523	Continuing Calibration	Barium	JPL23A-AP17(1)	0.0005	mg/L	200	none	mg/kg
250523	Continuing Calibration	Barium	JPL23A-AP18(1)	0.0005	mg/L	55	none	mg/kg
250523	Continuing Calibration	Barium	JPL23A-AP19(1)	0.0005	mg/L	160	none	mg/kg
250523	Continuing Calibration	Barium	JPL23A-AP20(1)	0.0005	mg/L	77	none	mg/kg
250523	Continuing Calibration	Barium	JPL23A-AF5(6)	0.0005	mg/L	47	none	mg/kg
250523	Continuing Calibration	Barium	JPL23A-AF6(6)	0.0005	mg/L	55	none	mg/kg
250523	Continuing Calibration	Barium	JPL23A-AF7(6)	0.0005	mg/L	70	none	mg/kg
250523	Continuing Calibration	Barium	JPL23A-AP17(1)-D	0.0005	mg/L	150	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
250534	Initial Calibration	Barium	JPL23A-AP21(1)	0.00041	mg/L	100	none	mg/kg
250534	Initial Calibration	Barium	JPL23A-AP22(4)	0.00041	mg/L	56	none	mg/kg
250534	Initial Calibration	Barium	JPL23A-AF8(6)	0.00041	mg/L	51	none	mg/kg
250534	Initial Calibration	Barium	JPL23A-AF8(6)-D	0.00041	mg/L	45	none	mg/kg
250534	Initial Calibration	Lead	JPL23A-AP21(1)	0.00455	mg/L	12	none	mg/kg
250534	Initial Calibration	Lead	JPL23A-AP22(4)	0.00455	mg/L	14	none	mg/kg
250534	Initial Calibration	Lead	JPL23A-AF8(6)	0.00455	mg/L	13	none	mg/kg
250534	Initial Calibration	Lead	JPL23A-AF8(6)-D	0.00455	mg/L	15	none	mg/kg
250534	Continuing Calibration	Barium	JPL23A-AP21(1)	0.00057	mg/L	100	none	mg/kg
250534	Continuing Calibration	Barium	JPL23A-AP22(4)	0.00057	mg/L	56	none	mg/kg
250534	Continuing Calibration	Barium	JPL23A-AF8(6)	0.00057	mg/L	51	none	mg/kg
250534	Continuing Calibration	Barium	JPL23A-AF8(6)-D	0.00057	mg/L	45	none	mg/kg
250536	Method	Chromium	JPL23A-AP23(1)	0.11	mg/kg	24	none	mg/kg
250536	Method	Chromium	JPL23A-AP24(4)	0.11	mg/kg	16	none	mg/kg
250536	Method	Chromium	JPL23A-AP25(1)	0.11	mg/kg	16	none	mg/kg
250536	Method	Chromium	JPL23A-AP26(4)	0.11	mg/kg	16	none	mg/kg
250536	Method	Chromium	JPL23A-AP27(1)	0.11	mg/kg	19	none	mg/kg
250536	Method	Chromium	JPL23A-AP28(4)	0.11	mg/kg	15	none	mg/kg
250536	Method	Chromium	JPL23A-AP29(1)	0.11	mg/kg	18	none	mg/kg
250536	Method	Chromium	JPL23A-AP30(4)	0.11	mg/kg	14	none	mg/kg
250536	Method	Chromium	JPL23A-AF9(6)	0.11	mg/kg	17	none	mg/kg
250536	Continuing Calibration	Barium	JPL23A-AP23(1)	0.00049	mg/kg	130	none	mg/kg
250536	Continuing Calibration	Barium	JPL23A-AP24(4)	0.00049	mg/kg	62	none	mg/kg
250536	Continuing Calibration	Barium	JPL23A-AP25(1)	0.00049	mg/kg	63	none	mg/kg
250536	Continuing Calibration	Barium	JPL23A-AP26(4)	0.00042	mg/kg	59	none	mg/kg
250536	Continuing Calibration	Barium	JPL23A-AP27(1)	0.00042	mg/kg	110	none	mg/kg
250536	Continuing Calibration	Barium	JPL23A-AP28(4)	0.00042	mg/kg	68	none	mg/kg
250536	Continuing Calibration	Barium	JPL23A-AP29(1)	0.00042	mg/kg	100	none	mg/kg
250548	Initial Calibration	Lead	JPM12-STOCKPILE-1(0)	0.00287	mg/L	260	none	mg/kg
250549	Initial Calibration	Lead	JPM12-STOCKPILE-2(0)	0.00287	mg/L	58	none	mg/kg
250550	Initial Calibration	Lead	JPM12-STOCKPILE-3(0)	0.00287	mg/L	86	none	mg/kg
250551	Initial Calibration	Lead	JPM12-STOCKPILE-4(0)	0.00287	mg/L	30	none	mg/kg
250552	Initial Calibration	Lead	JPM12-STOCKPILE-5(0)	0.00287	mg/L	430	none	mg/kg
250560	Method	Chromium	JPL23A-AF10(6)	0.12	mg/kg	17	none	mg/kg
250560	Method	Chromium	JPL23A-AF11(6)	0.12	mg/kg	16	none	mg/kg
250560	Method	Chromium	JPL23A-AF12(6)	0.12	mg/kg	15	none	mg/kg
250560	Method	Lead	JPL23A-AF10(6)	0.33	mg/kg	13	none	mg/kg
250560	Method	Lead	JPL23A-AF11(6)	0.33	mg/kg	12	none	mg/kg
250560	Method	Lead	JPL23A-AF12(6)	0.33	mg/kg	13	none	mg/kg
250560	Method	Zinc	JPL23A-AF10(6)	1.64	mg/kg	50	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
250560	Method	Zinc	JPL23A-AF11(6)	1.64	mg/kg	60	none	mg/kg
250560	Method	Zinc	JPL23A-AF12(6)	1.64	mg/kg	58	none	mg/kg
250560	Initial Calibration	Antimony	JPL23A-AF10(6)	0.00455	mg/L	1.7	B none	mg/kg
250560	Initial Calibration	Antimony	JPL23A-AF11(6)	0.00455	mg/L	0.88	B none	mg/kg
250560	Initial Calibration	Antimony	JPL23A-AF12(6)	0.00455	mg/L	1.2	B none	mg/kg
250573	Continuing Calibration	Antimony	JPL23A-SP1(0.5)	0.00385	mg/L	18	none	mg/kg
250573	Continuing Calibration	Antimony	JPL23A-SP2(0.5)	0.00385	mg/L	4.2	none	mg/kg
250573	Continuing Calibration	Antimony	JPL23A-SP3(0.5)	0.00385	mg/L	0.62	B none	mg/kg
250573	Continuing Calibration	Antimony	JPL23A-SP4(0.5)	0.00385	mg/L	5.1	none	mg/kg
250573	Continuing Calibration	Chromium	JPL23A-SP1(0.5)	0.00136	mg/L	42	none	mg/kg
250574	Continuing Calibration	Chromium	JPL23A-SP2(0.5)	0.00136	mg/L	15	none	mg/kg
250575	Continuing Calibration	Chromium	JPL23A-SP3(0.5)	0.00136	mg/L	13	none	mg/kg
250576	Continuing Calibration	Chromium	JPL23A-SP4(0.5)	0.00136	mg/L	20	none	mg/kg
250576	Initial Calibration	Lead	JPL23A-SP1(0.5)	0.00323	mg/L	540	none	mg/kg
250576	Initial Calibration	Lead	JPL23A-SP2(0.5)	0.00323	mg/L	100	none	mg/kg
250576	Initial Calibration	Lead	JPL23A-SP3(0.5)	0.00323	mg/L	16	none	mg/kg
250576	Initial Calibration	Lead	JPL23A-SP4(0.5)	0.00323	mg/L	110	none	mg/kg
250595	Initial Calibration	Copper	JPL2-AP111(0.5)	0.00242	mg/L	7900	none	mg/kg
250595	Continuing Calibration	Cadmium	JPL2-AP109(0.5)	0.00061	mg/L	16	none	mg/kg
250595	Continuing Calibration	Cadmium	JPL2-AP110(0.5)	0.00061	mg/L	4.4	none	mg/kg
250595	Continuing Calibration	Cadmium	JPL2-AP111(0.5)	0.00061	mg/L	11	none	mg/kg
250595	Continuing Calibration	Cadmium	JPL2-AP109(0.5)	0.00038	mg/L	16	none	mg/kg
250595	Continuing Calibration	Cadmium	JPL2-AP110(0.5)	0.00038	mg/L	4.4	none	mg/kg
250595	Continuing Calibration	Cadmium	JPL2-AP111(0.5)	0.00038	mg/L	11	none	mg/kg
250595	Continuing Calibration	Copper	JPL2-AP109(0.5)	0.00337	mg/L	2100	none	mg/kg
250595	Continuing Calibration	Copper	JPL2-AP110(0.5)	0.00337	mg/L	79	none	mg/kg
250595	Continuing Calibration	Silver	JPL2-AP109(0.5)	0.00251	mg/L	17	none	mg/kg
250595	Continuing Calibration	Silver	JPL2-AP110(0.5)	0.00251	mg/L	0.24	B none	mg/kg
250595	Continuing Calibration	Silver	JPL2-AP111(0.5)	0.00251	mg/L	1.6	none	mg/kg
250597	Method	Copper	JPL2-AF57(2)	0.28	mg/L	19	none	mg/kg
250597	Method	Copper	JPL2-AF58(2)	0.28	mg/L	31	none	mg/kg
250597	Method	Copper	JPL2-AP112(0.5)	0.28	mg/L	580	none	mg/kg
250597	Method	Copper	JPL2-AP114(0.5)	0.28	mg/L	190	none	mg/kg
250597	Method	Copper	JPL2-AF57(2)-D	0.28	mg/L	32	none	mg/kg
250597	Initial Calibration	Arsenic	JPL2-AF57(2)	0.00215	mg/L	9.3	none	mg/kg
250597	Initial Calibration	Arsenic	JPL2-AF58(2)	0.00215	mg/L	10	none	mg/kg
250597	Initial Calibration	Arsenic	JPL2-AP114(0.5)	0.00215	mg/L	9.5	none	mg/kg
250597	Initial Calibration	Arsenic	JPL2-AF57(2)-D	0.00215	mg/L	9	none	mg/kg
250597	Initial Calibration	Cadmium	JPL2-AF57(2)	0.00037	mg/L	0.069	B none	mg/kg
250597	Initial Calibration	Cadmium	JPL2-AF58(2)	0.00037	mg/L	0.35	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
250597	Initial Calibration	Cadmium	JPL2-AP114(0.5)	0.00037	mg/L	7	none	mg/kg
250597	Initial Calibration	Cadmium	JPL2-AF57(2)-D	0.00037	mg/L	0.090	B none	mg/kg
250597	Initial Calibration	Silver	JPL2-AF57(2)	0.00132	mg/L	0.18	B none	mg/kg
250597	Initial Calibration	Silver	JPL2-AF58(2)	0.00132	mg/L	0.37	B none	mg/kg
250597	Initial Calibration	Silver	JPL2-AP114(0.5)	0.00132	mg/L	1.9	none	mg/kg
250597	Initial Calibration	Silver	JPL2-AF57(2)-D	0.00132	mg/L	0.58	U UB	mg/kg
250597	Continuing Calibration	Cadmium	JPL2-AF57(2)	0.00108	mg/L	0.069	B none	mg/kg
250597	Continuing Calibration	Cadmium	JPL2-AF58(2)	0.00108	mg/L	0.35	none	mg/kg
250597	Continuing Calibration	Cadmium	JPL2-AP114(0.5)	0.00108	mg/L	7	none	mg/kg
250597	Continuing Calibration	Cadmium	JPL2-AF57(2)-D	0.00108	mg/L	0.090	B none	mg/kg
250603	Continuing Calibration	Cadmium	JPL2-AP115(0.5)	0.00039	mg/L	6.4	none	mg/kg
250603	Continuing Calibration	Cadmium	JPL2-AP116(0.5)	0.00039	mg/L	5.7	none	mg/kg
250606	Initial Calibration	Arsenic	JPL2-SP4(0)	0.00233	mg/L	11	none	mg/kg
250606	Initial Calibration	Arsenic	JPL2-SP5(0)	0.00233	mg/L	9.9	none	mg/kg
250606	Initial Calibration	Arsenic	JPL2-SP6(0)	0.00233	mg/L	4.2	none	mg/kg
250606	Initial Calibration	Arsenic	JPL2-SP7(0)	0.00233	mg/L	7.3	none	mg/kg
500-4287-1	Method	Zinc	JPL2-AP121(0.5)	0.32	J	540	none	mg/kg
500-4317-4	Method	Silver	JPL2-AP122(0.5)	0.12	J	0.31	JB B	mg/kg
500-4317-4	Method	Silver	JPL2-SP8(0.5)	0.12	J	0.78	B none	mg/kg
500-4317-4	Method	Silver	JPL2-SP9(0.5)	0.12	J	3.0	B none	mg/kg
500-4317-4	Method	Silver	JPL2-AST-TF1(3)	0.12	J	0.28	JB B	mg/kg
500-4317-4	Method	Silver	JPL2-AST-TF2(4)	0.12	J	0.57	B	mg/kg
500-4317-4	Method	Silver	JPL2-AST-TP1(0.5)	0.12	J	0.53	B	mg/kg
500-4317-4	Method	Silver	JPL2-AST-TP2(0.5)	0.12	J	4.5	B none	mg/kg
500-4317-4	Method	Silver	JPL2-AST-TP3(0.5)	0.12	J	1.3	B none	mg/kg
500-4362-1	Initial Calibration	Lead	JPL2-CP93(0.5)	0.0036	J	89	none	mg/kg
500-4362-1	Initial Calibration	Lead	JPL2-CP94(0.5)	0.0036	J	1900	none	mg/kg
500-4427-1	Method	Zinc	JPL2-AP123(0.5)	0.75	J	74	none	mg/kg
500-4427-1	Method	Zinc	JPL2-AP124(0.5)	0.75	J	110	none	mg/kg
500-4427-1	Method	Zinc	JPL2-PF4(4)	0.75	J	65	none	mg/kg
500-4427-1	Method	Zinc	JPL2-PF5(4)	0.75	J	160	none	mg/kg
500-4427-1	Method	Zinc	JPL2-PF6(6)	0.75	J	110	none	mg/kg
500-4561-1	Method	Zinc	JPL2-AP129(1)	0.48	J	890	none	mg/kg
500-4561-1	Method	Zinc	JPL2-AP130(4)	0.48	J	240	none	mg/kg
500-4561-1	Method	Zinc	JPL2-AP131(1)	0.48	J	51	none	mg/kg
500-4561-1	Method	Zinc	JPL2-AP132(4)	0.48	J	21	none	mg/kg
500-4561-1	Method	Zinc	JPL2-AP133(1)	0.48	J	67	none	mg/kg
500-4561-1	Method	Zinc	JPL2-AP134(4)	0.48	J	450	none	mg/kg
500-4561-1	Method	Zinc	JPL2-AP135(1)	0.48	J	200	none	mg/kg
500-4561-1	Method	Zinc	JPL2-AP136(4)	0.48	J	64	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
500-4561-1	Method	Zinc	JPL2-AF62(10)	0.48 J	mg/kg	680	none	mg/kg
500-4598-2	Method	Silver	JPM4-EXCAVATION WATER	0.0014 J	mg/L	0.0011	JB B	mg/L
500-4630-1	Method	Zinc	JPL2-SP12(0.5)	1.5 J	mg/kg	810	B none	mg/kg
500-4630-1	Method	Zinc	JPL2-SP13(0.5)	1.5 J	mg/kg	360	B none	mg/kg
500-4630-1	Method	Zinc	JPL2-SP14(0.5)	1.5 J	mg/kg	56000	B none	mg/kg
500-4630-1	Method	Zinc	JPL2-SP15(0.5)	1.5 J	mg/kg	520	B none	mg/kg
500-4630-1	Method	Zinc	JPL2-SP16(0.5)	1.5 J	mg/kg	160	B none	mg/kg
500-4630-1	Initial Calibration	Lead	JPL2-SP12(0.5)	0.0034	mg/L	130	none	mg/kg
500-4630-1	Initial Calibration	Lead	JPL2-SP13(0.5)	0.0034	mg/L	69	none	mg/kg
500-4630-1	Initial Calibration	Lead	JPL2-SP14(0.5)	0.0034	mg/L	2600	none	mg/kg
500-4630-1	Initial Calibration	Lead	JPL2-SP15(0.5)	0.0034	mg/L	78	none	mg/kg
500-4630-1	Initial Calibration	Lead	JPL2-SP16(0.5)	0.0034	mg/L	28	none	mg/kg
500-4561-1	Initial Calibration	Lead	JPL2-AP129(1)	0.0027 J	mg/L	30	none	mg/kg
500-4954-1	Method	Lead	JPL5-1(3)	0.29 J	mg/kg	15	none	mg/kg
500-4954-1	Method	Lead	JPL5-2(3)	0.29 J	mg/kg	12	none	mg/kg
500-4954-1	Method	Lead	JPL5-3(3)	0.29 J	mg/kg	13	none	mg/kg
500-4954-1	Method	Lead	JPL5-4(3)	0.29 J	mg/kg	15	none	mg/kg
500-4954-1	Method	Lead	JPL5-5(3)	0.29 J	mg/kg	13	none	mg/kg
500-4954-1	Method	Lead	JPL5-6(3)	0.29 J	mg/kg	14	none	mg/kg
500-4954-1	Method	Lead	JPL5-7(3)	0.29 J	mg/kg	14	none	mg/kg
500-4954-1	Method	Lead	JPL5-8(3)	0.29 J	mg/kg	21	none	mg/kg
500-4954-1	Method	Lead	JPL5-9(3)	0.29 J	mg/kg	16	none	mg/kg
500-4954-1	Method	Lead	JPL5-10(3)	0.29 J	mg/kg	17	none	mg/kg
500-4954-1	Method	Lead	JPL5-11(3)	0.29 J	mg/kg	18	none	mg/kg
500-4954-1	Method	Lead	JPL5-12(3)	0.29 J	mg/kg	22	none	mg/kg
500-4954-1	Method	Lead	JPL5-13(D)	0.29 J	mg/kg	81	none	mg/kg
500-4954-1	Method	Lead	JPL5-10-D(3)	0.29 J	mg/kg	15	none	mg/kg
500-4685-1	Method	Zinc	JPL5-AP1(0.5)	0.49 J	mg/kg	330	none	mg/kg
500-4685-1	Method	Zinc	JPL5-AP2(0.5)	0.49 J	mg/kg	84	none	mg/kg
500-4685-1	Method	Zinc	JPL5-AP3(0.5)	0.49 J	mg/kg	60	none	mg/kg
500-4685-1	Method	Zinc	JPL5-AP4(0.5)	0.49 J	mg/kg	98	none	mg/kg
500-4685-1	Method	Zinc	JPL5-AF1(1)	0.49 J	mg/kg	73	none	mg/kg
500-4685-1	Method	Zinc	JPL5-AF2(1)	0.49 J	mg/kg	79	none	mg/kg
500-4685-1	Method	Zinc	JPL5-AF3(1)	0.49 J	mg/kg	61	none	mg/kg
500-4685-1	Method	Zinc	JPL5-AF3(1)-D	0.49 J	mg/kg	60	none	mg/kg
500-4685-1	Initial Calibration	Lead	JPL5-AP1(0.5)	0.0033 J	mg/L	110	none	mg/kg
500-4685-1	Initial Calibration	Lead	JPL5-AP2(0.5)	0.0033 J	mg/L	16	none	mg/kg
500-4685-1	Initial Calibration	Lead	JPL5-AP3(0.5)	0.0033 J	mg/L	16	none	mg/kg
500-4685-1	Initial Calibration	Lead	JPL5-AP4(0.5)	0.0033 J	mg/L	24	none	mg/kg
500-4685-1	Initial Calibration	Lead	JPL5-AF1(1)	0.0033 J	mg/L	18	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
500-4685-1	Initial Calibration	Lead	JPL5-AF2(1)	0.0033 J	mg/L	16	none	mg/kg
500-4685-1	Initial Calibration	Lead	JPL5-AF3(1)	0.0033 J	mg/L	15	none	mg/kg
500-4685-1	Initial Calibration	Lead	JPL5-AF3(1)-D	0.0033 J	mg/L	13	none	mg/kg
500-5122-1	Method	Lead	JPM4-AF7(1)	0.32 J	mg/kg	25000	B none	mg/kg
500-5122-1	Method	Lead	JPM4-AP11(0.5)	0.32 J	mg/kg	21	B none	mg/kg
500-5122-1	Method	Lead	JPM4-AP12(0.5)	0.32 J	mg/kg	130	B none	mg/kg
500-5122-1	Method	Lead	JPM4-AP13(0.5)	0.32 J	mg/kg	18000	B none	mg/kg
500-5122-1	Method	Lead	JPM4-AP14(0.5)	0.32 J	mg/kg	290	VB none	mg/kg
500-5122-1	Method	Lead	JPM4-AF7(1)	0.32 J	mg/kg	82	none	mg/L
500-5122-1	Method	Lead	JPM4-AP11(0.5)	0.32 J	mg/kg	0.023	J B	mg/L
500-5122-1	Method	Lead	JPM4-AP12(0.5)	0.32 J	mg/kg	0.031	J B	mg/L
500-5122-1	Method	Lead	JPM4-AP13(0.5)	0.32 J	mg/kg	20	none	mg/L
500-5122-1	Method	Lead	JPM4-AP14(0.5)	0.32 J	mg/kg	0.054	B	mg/L
500-5265-1	Continuing Calibration	Thallium	JPL5-PCN-1(3)	0.0080 J	mg/L	<1.0	UB	mg/L
500-5265-1	Continuing Calibration	Thallium	JPL5-PCN-2(3)	0.0080 J	mg/L	<1.1	UB	mg/L
500-5265-1	Continuing Calibration	Thallium	JPL5-PCN-3(3)	0.0080 J	mg/L	<1.0	UB	mg/L
500-5265-1	Method	Zinc	JPL5-PCN-1(3)	1.2 J	mg/kg	870	none	mg/L
500-5265-1	Method	Zinc	JPL5-PCN-2(3)	1.2 J	mg/kg	470	none	mg/L
500-5265-1	Method	Zinc	JPL5-PCN-3(3)	1.2 J	mg/kg	1700	none	mg/L
500-5265-1	Method	Zinc	JPL5-PCN-4(3)	1.2 J	mg/kg	130	none	mg/L
500-5265-1	Method	Zinc	JPL5-PCN-5(3)	1.2 J	mg/kg	95	none	mg/L
500-5265-1	Method	Zinc	JPL5-PCN-6(3)	1.2 J	mg/kg	120	none	mg/L
500-5265-1	Method	Zinc	JPL5-PCN-7(3)	1.2 J	mg/kg	130	none	mg/L
500-5265-1	Method	Zinc	JPL5-PCN-8(3)	1.2 J	mg/kg	440	none	mg/L
500-5265-1	Method	Zinc	JPL5-PCN-9(3)	1.2 J	mg/kg	550	none	mg/L
500-5265-1	Method	Zinc	JPL5-PCN-10(3)	1.2 J	mg/kg	800	none	mg/L
500-5306-1	Method	Lead	JPL5-15(0)	0.36 J	mg/kg	14	none	mg/kg
500-5306-1	Method	Lead	JPL5-14(3)	0.36 J	mg/kg	72	none	mg/kg
500-5306-1	Initial Calibration	Lead	JPL5-15(0)	0.0029 J	mg/L	14	none	mg/kg
500-5306-1	Initial Calibration	Lead	JPL5-14(3)	0.0029 J	mg/L	72	none	mg/kg
500-5306-1	Continuing Calibration	Lead	JPL5-15(0)	0.0035 J	mg/L	14	none	mg/kg
500-5306-1	Continuing Calibration	Lead	JPL5-14(3)	0.0035 J	mg/L	72	none	mg/kg
500-5427-1	Method	Zinc	JPL2-STORMWATER-US#5	0.006	mg/L	0.014	JB B	mg/L
500-5427-1	Method	Zinc	JPL3-STORMWATER-DS#5	0.006	mg/L	0.024	B B	mg/L
500-5427-1	Initial Calibration	Lead	JPL2-STORMWATER-US#5	.0035 J	mg/L	<0.0050	UB	mg/L
500-5427-1	Initial Calibration	Lead	JPL3-STORMWATER-DS#5	.0035 J	mg/L	0.0043	B	mg/L
500-5499-1	Method	Zinc	JPL5-AP10(0.5)	0.97 J	mg/kg	380	B none	mg/kg
500-5499-1	Method	Zinc	JPL5-AP11(0.5)	0.97 J	mg/kg	78	B none	mg/kg
500-5499-1	Method	Zinc	JPL5-AP12(0.5)	0.97 J	mg/kg	60	B none	mg/kg
500-5499-1	Method	Zinc	JPL5-AP24(0.5)	0.66 J	mg/kg	49	B none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
500-5499-1	Method	Zinc	JPL5-AP25(0.5)	0.66 J	mg/kg	48 B	none	mg/kg
500-5499-1	Method	Zinc	JPL5-AP26(0.5)	0.66 J	mg/kg	47 B	none	mg/kg
500-5499-1	Method	Zinc	JPL5-AP27(0.5)	0.66 J	mg/kg	44 B	none	mg/kg
500-5499-1	Method	Zinc	JPL5-AP28(0.5)	0.66 J	mg/kg	66 B	none	mg/kg
500-5499-1	Method	Zinc	JPL5-AP29(0.5)	0.66 J	mg/kg	71 B	none	mg/kg
500-5499-1	Method	Zinc	JPL5-AP30(0.5)	0.66 J	mg/kg	64 B	none	mg/kg
500-5499-1	Method	Zinc	JPL5-AP31(0.5)	0.66 J	mg/kg	38 B	none	mg/kg
500-5499-1	Method	Zinc	JPL5-AP32(0.5)	0.66 J	mg/kg	59 B	none	mg/kg
500-5499-1	Method	Zinc	JPL5-AP33(0.5)	0.66 J	mg/kg	49 B	none	mg/kg
500-5499-1	Continuing Calibration	Thallium	JPL5-AP13(0.5)	0.0069 J	mg/L	0.74 J	none	mg/kg
500-5499-1	Continuing Calibration	Thallium	JPL5-AP14(0.5)	0.0069 J	mg/L	<1.1 UB		mg/kg
500-5499-1	Continuing Calibration	Thallium	JPL5-AP15(0.5)	0.0069 J	mg/L	1.3	none	mg/kg
500-5499-1	Continuing Calibration	Thallium	JPL5-AP16(0.5)	0.0069 J	mg/L	0.50 J	none	mg/kg
500-5499-1	Continuing Calibration	Thallium	JPL5-AP17(0.5)	0.0069 J	mg/L	<1.2 UB		mg/kg
500-5499-1	Continuing Calibration	Thallium	JPL5-AP18(0.5)	0.0069 J	mg/L	1.0 J	none	mg/kg
500-5499-1	Continuing Calibration	Thallium	JPL5-AP19(0.5)	0.0069 J	mg/L	0.61 J	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AP34(0.5)	0.31 J	mg/kg	46 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AP35(0.5)	0.31 J	mg/kg	50 BV	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AP36(0.5)	0.31 J	mg/kg	81 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF9(3)	0.31 J	mg/kg	79 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF10(3)	0.31 J	mg/kg	64 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF11(3)	0.31 J	mg/kg	44 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF12(3)	0.31 J	mg/kg	61 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF13(3)	0.31 J	mg/kg	69 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF14(3)	0.31 J	mg/kg	52 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF15(3)	0.31 J	mg/kg	66 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF16(3)	0.31 J	mg/kg	62 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF17(3)	0.31 J	mg/kg	66 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF18(3)	0.31 J	mg/kg	53 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF19(3)	0.31 J	mg/kg	60 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF20(3)	0.31 J	mg/kg	63 BV	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF21(3)	0.31 J	mg/kg	43 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF20(3)-D	0.31 J	mg/kg	63 B	none	mg/kg
500-5501-1	Method	Zinc	JPL5-AF21(3)-D	0.31 J	mg/kg	40 B	none	mg/kg
500-5501-1	Continuing Calibration	Thallium	JPL5-AF9(3)	0.0054 J	mg/L	1.1	none	mg/L
500-5501-1	Continuing Calibration	Thallium	JPL5-AF10(3)	0.0054 J	mg/L	0.91 J	none	mg/L
500-5501-1	Continuing Calibration	Thallium	JPL5-AF11(3)	0.0054 J	mg/L	1.1	none	mg/L
500-5501-1	Continuing Calibration	Thallium	JPL5-AF12(3)	0.0054 J	mg/L	1.6	none	mg/L
500-5501-1	Continuing Calibration	Thallium	JPL5-AF13(3)	0.0054 J	mg/L	<0.99	none	mg/L
500-5501-1	Continuing Calibration	Thallium	JPL5-AF14(3)	0.0054 J	mg/L	1.5	none	mg/L

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
500-5501-1	Continuing Calibration	Thallium	JPL5-AF15(3)	0.0026 J	mg/L	0.52 J	none	mg/L
500-5501-1	Continuing Calibration	Thallium	JPL5-AF16(3)	0.0026 J	mg/L	<1.1	none	mg/L
500-5501-1	Continuing Calibration	Thallium	JPL5-AF17(3)	0.0026 J	mg/L	1.4	none	mg/L
500-5501-1	Continuing Calibration	Thallium	JPL5-AF18(3)	0.0026 J	mg/L	<0.97	none	mg/L
500-5501-1	Continuing Calibration	Thallium	JPL5-AF19(3)	0.0026 J	mg/L	1.1	none	mg/L
500-5501-1	Continuing Calibration	Thallium	JPL5-AF20(3)	0.0026 J	mg/L	1.5	none	mg/L
500-5681-1	Method	Lead	JPL3-BLAST PIT(2)	0.27 J	mg/kg	1100	none	mg/L
500-5681-1	Method	Zinc	JPL3-BLAST PIT(2)	1.4 J	mg/kg	87	none	mg/L
500-5719-1	Method	Zinc	JPL3-STOCKPILE-2(0)	0.75 J	mg/kg	260 B	none	mg/L
500-5719-1	Method	Zinc	JPL3-STOCKPILE-1(0)	0.75 J	mg/kg	360 VB	none	mg/L
500-5767-1	Method	Lead	JPM4-AP21(0.5)	0.48 J	mg/kg	480	none	mg/L
500-5767-1	Method	Lead	JPM4-AP22(2)	0.48 J	mg/kg	270	none	mg/L
500-5767-1	Method	Lead	JPM4-AP23(0.5)	0.48 J	mg/kg	0.045 J	B	mg/L
500-5767-1	Method	Lead	JPM4-AP24(2)	0.48 J	mg/kg	22	none	mg/L
500-5767-1	Method	Lead	JPM4-AP25(0.5)	0.48 J	mg/kg	0.015 J	B	mg/L
500-5767-1	Method	Lead	JPM4-AP26(2)	0.48 J	mg/kg	0.14	B	mg/L
500-5767-1	Method	Lead	JPM4-AP27(0.5)	0.48 J	mg/kg	4.5	none	mg/L
500-5767-1	Method	Lead	JPM4-AP28(2)	0.48 J	mg/kg	0.0066 J	B	mg/L
500-5767-1	Method	Lead	JPM4-AP29(0.5)	0.48 J	mg/kg	8.6	none	mg/L
500-5767-1	Method	Lead	JPM4-AP30(2)	0.48 J	mg/kg	1.5	B	mg/L
500-5767-1	Method	Lead	JPM4-AP31(0.5)	0.48 J	mg/kg	9.4	none	mg/L
500-5767-1	Method	Lead	JPM4-AP30(2)-D	0.48 J	mg/kg	0.075	B	mg/L
500-5933-1	Method	Copper	JPL5-PCN2-1(5)	0.15 J	mg/kg	39	none	mg/kg
500-5933-1	Method	Copper	JPL5-PCN2-2(5)	0.15 J	mg/kg	26	none	mg/kg
500-5933-1	Method	Copper	JPL5-PCN2-3(5)	0.15 J	mg/kg	27	none	mg/kg
500-5933-1	Method	Copper	JPL5-PCN2-4(5)	0.15 J	mg/kg	28	none	mg/kg
500-5933-1	Method	Copper	JPL5-PCN2-5(5)	0.15 J	mg/kg	32	none	mg/kg
500-5933-1	Method	Copper	JPL5-PCN2-6(5)	0.15 J	mg/kg	28	none	mg/kg
500-5933-1	Method	Copper	JPL5-PCN2-7(5)	0.15 J	mg/kg	31	none	mg/kg
500-5933-1	Method	Copper	JPL5-PCN2-8(5)	0.15 J	mg/kg	31	none	mg/kg
500-5933-1	Method	Copper	JPL5-PCN2-9(5)	0.15 J	mg/kg	26	none	mg/kg
500-5933-1	Method	Copper	JPL5-PCN2-10(5)	0.15 J	mg/kg	27	none	mg/kg
500-5933-1	Method	Zinc	JPL5-PCN2-1(5)	0.61 J	mg/kg	80	none	mg/kg
500-5933-1	Method	Zinc	JPL5-PCN2-2(5)	0.61 J	mg/kg	57	none	mg/kg
500-5933-1	Method	Zinc	JPL5-PCN2-3(5)	0.61 J	mg/kg	67	none	mg/kg
500-5933-1	Method	Zinc	JPL5-PCN2-4(5)	0.61 J	mg/kg	67	none	mg/kg
500-5933-1	Method	Zinc	JPL5-PCN2-5(5)	0.61 J	mg/kg	80	none	mg/kg
500-5933-1	Method	Zinc	JPL5-PCN2-6(5)	0.61 J	mg/kg	73	none	mg/kg
500-5933-1	Method	Zinc	JPL5-PCN2-7(5)	0.61 J	mg/kg	82	none	mg/kg
500-5933-1	Method	Zinc	JPL5-PCN2-8(5)	0.61 J	mg/kg	83	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
500-5933-1	Method	Zinc	JPL5-PCN2-9(5)	0.61 J	mg/kg	62	none	mg/kg
500-5933-1	Method	Zinc	JPL5-PCN2-10(5)	0.61 J	mg/kg	72	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP32(0.5)	0.25 J	mg/kg	300	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP33(0.5)	0.25 J	mg/kg	12	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP34(0.5)	0.25 J	mg/kg	16	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP35(0.5)	0.25 J	mg/kg	17	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP36(0.5)	0.25 J	mg/kg	17	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP37(0.5)	0.25 J	mg/kg	16	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP38(0.5)	0.25 J	mg/kg	18	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP39(0.5)	0.25 J	mg/kg	170	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP40(0.5)	0.25 J	mg/kg	23	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP41(0.5)	0.25 J	mg/kg	85	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP42(0.5)	0.25 J	mg/kg	220	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP43(0.5)	0.25 J	mg/kg	20	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP44(0.5)	0.25 J	mg/kg	24	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP45(0.5)	0.25 J	mg/kg	74	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP46(0.5)	0.25 J	mg/kg	17	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP47(0.5)	0.25 J	mg/kg	18	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP48(0.5)	0.25 J	mg/kg	65	none	mg/kg
500-5975-1	Method	Lead	JPM4-AP49(0.5)	0.25 J	mg/kg	280	none	mg/kg
500-6015-1	Initial Calibration	Lead	JPL5-AP1(0.5)	0.0026 J	mg/L	35	none	mg/kg
500-6017-1	Initial Calibration	Lead	JPL5-AP37(0.5)	0.0026 J	mg/L	19	none	mg/kg
500-6017-1	Initial Calibration	Lead	JPL5-AP38(0.5)	0.0026 J	mg/L	29	none	mg/kg
500-6017-1	Initial Calibration	Lead	JPL5-AP39(0.5)	0.0026 J	mg/L	44	none	mg/kg
500-6017-1	Initial Calibration	Lead	JPL5-AP40(0.5)	0.0026 J	mg/L	57	none	mg/kg
500-6017-1	Initial Calibration	Lead	JPL5-AF22(2)	0.0026 J	mg/L	15	none	mg/kg
500-6017-1	Initial Calibration	Lead	JPL5-AF23(2)	0.0026 J	mg/L	14	none	mg/kg
500-6079-1	Initial Calibration	Lead	JPL2-SP17(1)	0.0030 J	mg/L	17	none	mg/kg
500-6079-1	Initial Calibration	Lead	JPL2-SP18(1)	0.0030 J	mg/L	14	none	mg/kg
500-6079-1	Initial Calibration	Lead	JPL2-SP19(1)	0.0030 J	mg/L	15	none	mg/kg
500-6079-1	Initial Calibration	Lead	JPL2-SP20(1)	0.0030 J	mg/L	16	none	mg/kg
500-6079-1	Method	Copper	JPL2-SP17(1)	0.17 J	mg/kg	16	none	mg/kg
500-6079-1	Method	Copper	JPL2-SP18(1)	0.17 J	mg/kg	14	none	mg/kg
500-6079-1	Method	Copper	JPL2-SP19(1)	0.17 J	mg/kg	28	none	mg/kg
500-6079-1	Method	Copper	JPL2-SP20(1)	0.17 J	mg/kg	27	none	mg/kg
500-6079-1	Method	Zinc	JPL2-SP17(1)	1.1 J	mg/kg	55	none	mg/kg
500-6079-1	Method	Zinc	JPL2-SP18(1)	1.1 J	mg/kg	46	none	mg/kg
500-6079-1	Method	Zinc	JPL2-SP19(1)	1.1 J	mg/kg	60	none	mg/kg
500-6079-1	Method	Zinc	JPL2-SP20(1)	1.1 J	mg/kg	58	none	mg/kg
500-6111-1	Continuing Calibration	Lead	JPM4-AP57(0.5)	0.0041 J	mg/L	480	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
500-6111-1	Continuing Calibration	Lead	JPM4-AP58(0.5)	0.0041 J	mg/L	23	none	mg/kg
500-6111-1	Continuing Calibration	Lead	JPM4-AP59(0.5)	0.0041 J	mg/L	55	none	mg/kg
500-6111-1	Method	Lead	JPM4-AP50(0.5)	0.48 J	mg/kg	4800	none	mg/kg
500-6111-1	Method	Lead	JPM4-AP51(0.5)	0.48 J	mg/kg	430	none	mg/kg
500-6111-1	Method	Lead	JPM4-AP52(0.5)	0.48 J	mg/kg	66	none	mg/kg
500-6111-1	Method	Lead	JPM4-AP53(0.5)	0.48 J	mg/kg	160	none	mg/kg
500-6111-1	Method	Lead	JPM4-AP54(0.5)	0.48 J	mg/kg	320	none	mg/kg
500-6111-1	Method	Lead	JPM4-AP55(0.5)	0.48 J	mg/kg	110000	none	mg/kg
500-6111-1	Method	Lead	JPM4-AP56(0.5)	0.48 J	mg/kg	1700	none	mg/kg
500-6111-1	Method	Lead	JPM4-AP57(0.5)	0.48 J	mg/kg	480	none	mg/kg
500-6111-1	Method	Lead	JPM4-AP58(0.5)	0.48 J	mg/kg	23	none	mg/kg
500-6111-1	Method	Lead	JPM4-AP59(0.5)	0.48 J	mg/kg	55	none	mg/kg
500-6133-1	Method	Copper	JPL2-AP137(0.5)	0.19 J	mg/kg	630	B none	mg/kg
500-6133-1	Method	Copper	JPL2-AP138(0.5)	0.19 J	mg/kg	340	B none	mg/kg
500-6133-1	Method	Zinc	JPL2-AP137(0.5)	0.43 J	mg/kg	840	VB none	mg/kg
500-6262-1	Method	Zinc	JPL2-AP147(0.5)	0.85 J	mg/kg	72	none	mg/kg
500-6262-1	Method	Zinc	JPL2-AP148(0.5)	0.85 J	mg/kg	79	none	mg/kg
500-6238-1	Method	Copper	JPL2-AP139(1)	0.29 J	mg/kg	36	none	mg/kg
500-6238-1	Method	Copper	JPL2-AP141(1)	0.29 J	mg/kg	18	none	mg/kg
500-6238-1	Method	Copper	JPL2-AP142(8)	0.29 J	mg/kg	22	none	mg/kg
500-6238-1	Method	Copper	JPL2-AP143(1)	0.29 J	mg/kg	22	none	mg/kg
500-6238-1	Method	Copper	JPL2-AP144(8)	0.29 J	mg/kg	24	none	mg/kg
500-6238-1	Method	Copper	JPL2-AP145(1)	0.29 J	mg/kg	27	none	mg/kg
500-6238-1	Method	Zinc	JPL2-AP139(1)	0.62 J	mg/kg	86	none	mg/kg
500-6238-1	Method	Zinc	JPL2-AP141(1)	0.62 J	mg/kg	40	none	mg/kg
500-6238-1	Method	Zinc	JPL2-AP142(8)	0.62 J	mg/kg	57	none	mg/kg
500-6592-1	Method	Copper	JPL3-AP12(1)	0.22 J	mg/kg	260	none	mg/kg
500-6592-1	Method	Copper	JPL3-AP13(1)	0.22 J	mg/kg	250	none	mg/kg
500-6592-1	Method	Copper	JPL3-AP14(1)	0.22 J	mg/kg	120	none	mg/kg
500-6592-1	Method	Copper	JPL3-AP15(1)	0.22 J	mg/kg	250	none	mg/kg
500-6592-1	Method	Copper	JPL3-AP16(1)	0.22 J	mg/kg	62	none	mg/kg
500-6592-1	Method	Copper	JPL3-AP17(1)	0.22 J	mg/kg	3100	none	mg/kg
500-6592-1	Method	Copper	JPL3-AP18(1)	0.22 J	mg/kg	52	none	mg/kg
500-6592-1	Method	Copper	JPL3-AP19(1)	0.22 J	mg/kg	62	none	mg/kg
500-6592-1	Method	Copper	JPL3-AF7(1)	0.22 J	mg/kg	49	none	mg/kg
500-6592-1	Method	Copper	JPL3-AF8(1)	0.22 J	mg/kg	72	none	mg/kg
500-6592-1	Method	Copper	JPL3-AF9(1)	0.22 J	mg/kg	23	none	mg/kg
500-6592-1	Method	Copper	JPL3-AF10(1)	0.22 J	mg/kg	34	none	mg/kg
500-6592-1	Method	Copper	JPL3-AF11(1)	0.22 J	mg/kg	31	none	mg/kg
500-6592-1	Method	Copper	JPL3-AF12(1)	0.22 J	mg/kg	24	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
500-6592-1	Method	Copper	JPL3-AF13(1)	0.22 J	mg/kg	120	none	mg/kg
500-6592-1	Method	Copper	JPL3-AF14(1)	0.22 J	mg/kg	74	none	mg/kg
500-6592-1	Method	Copper	JPL3-AF15(1)	0.22 J	mg/kg	18	none	mg/kg
500-6592-1	Method	Copper	JPL3-AF16(1)	0.22 J	mg/kg	450	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AP12(1)	0.61 J	mg/kg	710	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AP13(1)	0.61 J	mg/kg	2700	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AP14(1)	0.61 J	mg/kg	310	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AP15(1)	0.61 J	mg/kg	590	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AP16(1)	0.61 J	mg/kg	260	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AP17(1)	0.61 J	mg/kg	1500	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AP18(1)	0.61 J	mg/kg	100	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AP19(1)	0.61 J	mg/kg	170	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AF7(1)	0.61 J	mg/kg	140	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AF8(1)	0.61 J	mg/kg	210	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AF9(1)	0.61 J	mg/kg	82	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AF10(1)	0.61 J	mg/kg	100	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AF11(1)	0.61 J	mg/kg	87	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AF12(1)	0.61 J	mg/kg	75	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AF13(1)	0.61 J	mg/kg	270	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AF14(1)	0.61 J	mg/kg	180	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AF15(1)	0.61 J	mg/kg	58	none	mg/kg
500-6592-1	Method	Zinc	JPL3-AF16(1)	0.61 J	mg/kg	1700	none	mg/kg
500-6112-1	Method	Antimony	JPL5-SP1(1)	0.75 J	mg/kg	78	none	mg/kg
500-6112-1	Method	Antimony	JPL5-SP2(1)	0.75 J	mg/kg	130	none	mg/kg
500-6112-1	Method	Antimony	JPL5-SP3(1)	0.75 J	mg/kg	350	none	mg/kg
500-6112-1	Method	Antimony	JPL5-SP4(1)	0.75 J	mg/kg	130	none	mg/kg
500-6112-1	Method	Antimony	JPL5-SP5(1)	0.75 J	mg/kg	80	none	mg/kg
500-6112-1	Method	Antimony	JPL5-SP6(1)	0.75 J	mg/kg	67	none	mg/kg
500-6332-1	Method	Copper	JPL5-AF28(2)	0.20 J	mg/kg	26	B none	mg/kg
500-6332-1	Method	Copper	JPL5-AF29(2)	0.20 J	mg/kg	370	B none	mg/kg
500-6332-1	Method	Copper	JPL5-AP42(0.5)	0.20 J	mg/kg	1000	none	mg/kg
500-6332-1	Method	Copper	JPL5-AP43(0.5)	0.20 J	mg/kg	58	B none	mg/kg
500-6332-1	Method	Copper	JPL5-AP44(0.5)	0.20 J	mg/kg	4600	B none	mg/kg
500-6332-1	Method	Copper	JPL5-AP45(0.5)	0.20 J	mg/kg	5900	B none	mg/kg
500-6332-1	Method	Copper	JPL5-AP46(0.5)	0.20 J	mg/kg	1900	B none	mg/kg
500-6332-1	Method	Zinc	JPL5-AF28(2)	0.75 J	mg/kg	75	B none	mg/kg
500-6332-1	Method	Zinc	JPL5-AF29(2)	0.75 J	mg/kg	180000	B none	mg/kg
500-6332-1	Method	Zinc	JPL5-AP42(0.5)	0.75 J	mg/kg	2000	none	mg/kg
500-6332-1	Method	Zinc	JPL5-AP43(0.5)	0.75 J	mg/kg	140	B none	mg/kg
500-6332-1	Method	Zinc	JPL5-AP44(0.5)	0.75 J	mg/kg	2000	B none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
500-6332-1	Method	Zinc	JPL5-AP45(0.5)	0.75 J	mg/kg	4300 B	none	mg/kg
500-6332-1	Method	Zinc	JPL5-AP46(0.5)	0.75 J	mg/kg	2000 B	none	mg/kg
500-6444-1	Method	Zinc	JPL5-AF31(3)	0.88 J	mg/kg	71 VB	none	mg/kg
500-6444-1	Method	Zinc	JPL5-AP47(0.5)	0.88 J	mg/kg	490 B	none	mg/kg
500-6467-1	Method	Copper	JPL5-AF32(4)	0.15 J	mg/kg	67	none	mg/kg
500-6467-1	Method	Copper	JPL5-AP48(0.5)	0.15 J	mg/kg	17	none	mg/kg
500-6467-1	Method	Copper	JPL5-AP49(0.5)	0.15 J	mg/kg	42	none	mg/kg
500-6467-1	Method	Copper	JPL5-AP50(0.5)	0.15 J	mg/kg	25	none	mg/kg
500-6467-1	Method	Zinc	JPL5-AF32(4)	0.54 J	mg/kg	230	none	mg/kg
500-6467-1	Method	Zinc	JPL5-AP48(0.5)	0.54 J	mg/kg	52	none	mg/kg
500-6467-1	Method	Zinc	JPL5-AP49(0.5)	0.54 J	mg/kg	110	none	mg/kg
500-6467-1	Method	Zinc	JPL5-AP50(0.5)	0.54 J	mg/kg	64	none	mg/kg
500-6503-1	Method	Lead	JPM4-AP63(0.5)	0.39 J	mg/kg	890	none	mg/kg
500-6650-1	Method	Copper	JPL3-AF21(1)	016 J	mg/kg	82	none	mg/kg
500-6650-1	Method	Copper	JPL3-AF22(1)	016 J	mg/kg	22	none	mg/kg
500-6650-1	Method	Copper	JPL3-AF23(1)	016 J	mg/kg	24	none	mg/kg
500-6650-1	Method	Copper	JPL3-AF24(1)	016 J	mg/kg	21	none	mg/kg
500-6650-1	Method	Copper	JPL3-AP24(0.5)	016 J	mg/kg	140	none	mg/kg
500-6650-1	Method	Copper	JPL3-AP25(0.5)	016 J	mg/kg	40	none	mg/kg
500-6650-1	Method	Copper	JPL3-AP26(0.5)	016 J	mg/kg	26	none	mg/kg
500-6650-1	Method	Copper	JPL3-AP27(0.5)	016 J	mg/kg	29	none	mg/kg
500-6650-1	Method	Copper	JPL3-AP28(0.5)	016 J	mg/kg	180	none	mg/kg
500-6650-1	Method	Copper	JPL3-AP29(0.5)	016 J	mg/kg	39	none	mg/kg
500-6506-1	Method	Lead	JPL3-AP1(0.5)	0.39 J	mg/kg	92 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AP2(0.5)	0.39 J	mg/kg	39 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AP3(0.5)	0.39 J	mg/kg	20 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AP4(0.5)	0.39 J	mg/kg	22 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AP5(0.5)	0.39 J	mg/kg	280 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AP6(0.5)	0.39 J	mg/kg	41 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AP7(0.5)	0.39 J	mg/kg	11 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AP8(0.5)	0.39 J	mg/kg	56 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AP9(0.5)	0.39 J	mg/kg	120 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AP10(0.5)	0.39 J	mg/kg	1300 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AP11(0.5)	0.39 J	mg/kg	270 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AF1(2)	0.39 J	mg/kg	43 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AF2(2)	0.39 J	mg/kg	20 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AF3(2)	0.39 J	mg/kg	13 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AF4(2)	0.39 J	mg/kg	27 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AF5(2)	0.39 J	mg/kg	21 B	none	mg/kg
500-6506-1	Method	Lead	JPL3-AF6(2)	0.39 J	mg/kg	16 B	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
500-6506-1	Method	Zinc	JPL3-AP1(0.5)	0.62 J	mg/kg	240 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AP2(0.5)	0.62 J	mg/kg	210 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AP3(0.5)	0.62 J	mg/kg	100 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AP4(0.5)	0.62 J	mg/kg	76 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AP5(0.5)	0.62 J	mg/kg	560 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AP6(0.5)	0.62 J	mg/kg	87 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AP7(0.5)	0.62 J	mg/kg	41 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AP8(0.5)	0.62 J	mg/kg	94 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AP9(0.5)	0.62 J	mg/kg	250 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AP11(0.5)	0.62 J	mg/kg	580 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AF1(2)	0.62 J	mg/kg	120 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AF2(2)	0.62 J	mg/kg	91 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AF3(2)	0.62 J	mg/kg	44 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AF4(2)	0.62 J	mg/kg	73 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AF5(2)	0.62 J	mg/kg	55 B	none	mg/kg
500-6506-1	Method	Zinc	JPL3-AF6(2)	0.62 J	mg/kg	56 B	none	mg/kg
500-6713-1	Method	Lead	JPL3-CONCRETE	0.30 J	mg/kg	9.5	none	mg/kg
500-6714-1	Method	Zinc	JPL3-AP30(0.5)	0.90 J	mg/kg	65 B	none	mg/kg
500-6812-1	Method	Zinc	JPL3-AP35(0.5)	0.87 J	mg/kg	76	none	mg/kg
500-6812-1	Method	Zinc	JPL3-AP37(0.5)	0.87 J	mg/kg	84	none	mg/kg
500-6812-1	Method	Zinc	JPL3-AF25(2)	0.87 J	mg/kg	82	none	mg/kg
500-6812-1	Method	Zinc	JPL3-AF26(2)	0.87 J	mg/kg	100	none	mg/kg
500-6812-1	Method	Zinc	JPL3-AF27(2)	0.87 J	mg/kg	62	none	mg/kg
500-7047-1	Method	Copper	JPL3-SP1(0.5)	0.20 J	mg/kg	39 B	none	mg/kg
500-7047-1	Method	Zinc	JPL3-SP1(0.5)	0.88 J	mg/kg	120 B	none	mg/kg
500-7047-1	Method	Copper	JPL3-SP2(0.5)	0.20 J	mg/kg	33 B	none	mg/kg
500-7047-1	Method	Zinc	JPL3-SP2(0.5)	0.88 J	mg/kg	110 B	none	mg/kg
500-7047-1	Method	Copper	JPL3-SP3(0.5)	0.20 J	mg/kg	25 B	none	mg/kg
500-7047-1	Method	Zinc	JPL3-SP3(0.5)	0.88 J	mg/kg	87 B	none	mg/kg
500-7047-1	Method	Copper	JPL3-SP4(0.5)	0.20 J	mg/kg	150 B	none	mg/kg
500-7047-1	Method	Zinc	JPL3-SP4(0.5)	0.88 J	mg/kg	400 B	none	mg/kg
500-7047-1	Method	Copper	JPL3-SP5(0.5)	0.20 J	mg/kg	170 B	none	mg/kg
500-7047-1	Method	Zinc	JPL3-SP5(0.5)	0.88 J	mg/kg	430 B	none	mg/kg
500-7047-1	Method	Copper	JPL3-SP6(0.5)	0.20 J	mg/kg	280 B	none	mg/kg
500-7047-1	Method	Zinc	JPL3-SP6(0.5)	0.88 J	mg/kg	630 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AP1(0.5)	0.36 J	mg/kg	2.1 U	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AP1(0.5)	0.099 J	mg/kg	18 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AP1(0.5)	0.29 J	mg/kg	19 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AP1(0.5)	0.97 J	mg/kg	62 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AP2(0.5)	0.36 J	mg/kg	2.0 U	B	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

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Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
500-14347	Method	Chromium	JPL5-RS-AP2(0.5)	0.099 J	mg/kg	17 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AP2(0.5)	0.29 J	mg/kg	13 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AP2(0.5)	0.97 J	mg/kg	52 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AP3(0.5)	0.36 J	mg/kg	0.60 B	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AP3(0.5)	0.099 J	mg/kg	17 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AP3(0.5)	0.29 J	mg/kg	14 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AP3(0.5)	0.97 J	mg/kg	54 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AP4(0.5)	0.36 J	mg/kg	2.0 U	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AP4(0.5)	0.099 J	mg/kg	17 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AP4(0.5)	0.29 J	mg/kg	14 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AP4(0.5)	0.97 J	mg/kg	56 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AP5(0.5)	0.36 J	mg/kg	0.49 B	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AP5(0.5)	0.099 J	mg/kg	17 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AP5(0.5)	0.29 J	mg/kg	15 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AP5(0.5)	0.97 J	mg/kg	56 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AP6(0.5)	0.36 J	mg/kg	0.60 B	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AP6(0.5)	0.099 J	mg/kg	18 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AP6(0.5)	0.29 J	mg/kg	15 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AP6(0.5)	0.97 J	mg/kg	60 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AP7(0.5)	0.36 J	mg/kg	1.9 U	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AP7(0.5)	0.099 J	mg/kg	16 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AP7(0.5)	0.29 J	mg/kg	14 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AP7(0.5)	0.97 J	mg/kg	54 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AP8(0.5)	0.36 J	mg/kg	2.0 U	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AP8(0.5)	0.099 J	mg/kg	18 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AP8(0.5)	0.29 J	mg/kg	13 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AP8(0.5)	0.97 J	mg/kg	56 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AP9(0.5)	0.36 J	mg/kg	2.3 U	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AP9(0.5)	0.099 J	mg/kg	18 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AP9(0.5)	0.29 J	mg/kg	13 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AP9(0.5)	0.97 J	mg/kg	60 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AP10(0.5)	0.36 J	mg/kg	2.0 U	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AP10(0.5)	0.099 J	mg/kg	17 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AP10(0.5)	0.29 J	mg/kg	14 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AP10(0.5)	0.97 J	mg/kg	54 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AP11(0.5)	0.47 J	mg/kg	2.1 U	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AP11(0.5)	0.099 J	mg/kg	20 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AP11(0.5)	0.20 J	mg/kg	19 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AP11(0.5)	0.51 J	mg/kg	78 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AP12(0.5)	0.47 J	mg/kg	0.42 B	B	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

TABLE D-9

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING BLANK RECOVERIES (METALS)

Joliet Army Amunition Plant - SRU2 and SRU3 LAP

(Page 20 of 20)

Laboratory SDG	Blank	Analyte	Sample ID	Blank Concentration	Units	Sample Result	Flags	Units
500-14347	Method	Chromium	JPL5-RS-AP12(0.5)	0.099 J	mg/kg	18 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AP12(0.5)	0.20 J	mg/kg	16 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AP12(0.5)	0.51 J	mg/kg	68 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AF1(6)	0.47 J	mg/kg	0.39 B	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AF1(6)	0.099 J	mg/kg	19 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AF1(6)	0.20 J	mg/kg	18 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AF1(6)	0.51 J	mg/kg	69 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AF2(6)	0.47 J	mg/kg	2.3 U	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AF2(6)	0.099 J	mg/kg	20 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AF2(6)	0.20 J	mg/kg	24 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AF2(6)	0.51 J	mg/kg	76 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AF3(6)	0.47 J	mg/kg	0.94 B	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AF3(6)	0.099 J	mg/kg	19 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AF3(6)	0.20 J	mg/kg	14 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AF3(6)	0.51 J	mg/kg	59 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AF4(6)	0.47 J	mg/kg	0.43 B	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AF4(6)	0.099 J	mg/kg	22 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AF4(6)	0.20 J	mg/kg	21 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AF4(6)	0.51 J	mg/kg	64 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AF5(6)	0.47 J	mg/kg	2.4 U	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AF5(6)	0.099 J	mg/kg	19 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AF5(6)	0.20 J	mg/kg	16 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AF5(6)	0.51 J	mg/kg	64 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AF6(6)	0.47 J	mg/kg	2.2 U	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AF6(6)	0.099 J	mg/kg	14 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AF6(6)	0.20 J	mg/kg	14 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AF6(6)	0.51 J	mg/kg	84 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AF7(6)	0.47 J	mg/kg	0.57 U	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AF7(6)	0.099 J	mg/kg	22 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AF7(6)	0.20 J	mg/kg	17 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AF7(6)	0.51 J	mg/kg	67 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AF8(6)	0.47 J	mg/kg	0.69 B	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AF8(6)	0.099 J	mg/kg	19 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AF8(6)	0.20 J	mg/kg	14 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AF8(6)	0.51 J	mg/kg	63 B	none	mg/kg
500-14347	Method	Antimony	JPL5-RS-AF9(6)	0.47 J	mg/kg	2.2 U	B	mg/kg
500-14347	Method	Chromium	JPL5-RS-AF9(6)	0.099 J	mg/kg	21 B	none	mg/kg
500-14347	Method	Lead	JPL5-RS-AF9(6)	0.20 J	mg/kg	62 B	none	mg/kg
500-14347	Method	Zinc	JPL5-RS-AF9(6)	0.51 J	mg/kg	190 B	none	mg/kg

SDG-sample delivery group

ID-identification

B-compound also detected in method blank

mg/kg-milligrams per kilogram

APPENDIX E

VALIDATION VERIFICATION WORKSHEETS-EXPLOSIVES

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 7/28/2006

SDG: 247884
Instrument: 35

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2173	0.02	1	108650	2.13	108650	2.127	9.20E-06	8.98E-06	nr	1.0000	nr
	Level 2	5467	0.05	1	109340		109340		9.15E-06				
	Level 3	11017	0.1	1	110170		110170		9.08E-06				
	Level 4	22398	0.2	1	111990		111990		8.93E-06				
	Level 5	45584	0.4	1	113960		113960		8.78E-06				
	Level 6	114199	1	1	114199		114199		8.76E-06				
Average CF					111384.8		111384.8						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1657	0.02	1	82850	4.31	82850	4.310	1.21E-05	1.13E-05	nr	1.0000	nr
	Level 2	4282	0.05	1	85640		85640		1.17E-05				
	Level 3	8949	0.1	1	89490		89490		1.12E-05				
	Level 4	18189	0.2	1	90945		90945		1.10E-05				
	Level 5	36810	0.4	1	92025		92025		1.09E-05				
	Level 6	92358	1	1	92358		92358		1.08E-05				
Average CF					88884.7		88884.7						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3486	0.02	1	174300	1.43	174300	1.433	5.74E-06	5.59E-06	nr	1.0000	nr
	Level 2	8960	0.05	1	179200		179200		5.58E-06				
	Level 3	17845	0.1	1	178450		178450		5.60E-06				
	Level 4	35943	0.2	1	179715		179715		5.56E-06				
	Level 5	72531	0.4	1	181327.5		181328		5.51E-06				
	Level 6	181134	1	1	181134		181134		5.52E-06				
Average CF					179021.1		179021.2						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	1871	0.02	1	93550	5.11	93550	5.11	1.07E-05	9.63E-06	nr	1.0000	nr
	Level 2	5278	0.05	1	105560		105560		9.47E-06				
	Level 3	10543	0.1	1	105430		105430		9.48E-06				
	Level 4	20978	0.2	1	104890		104890		9.53E-06				
	Level 5	43377	0.4	1	108442.5		108443		9.22E-06				
	Level 6	106702	1	1	106702		106702		9.37E-06				
Average CF					104095.8		104095.8						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4349	0.02	1	217450	0.99	217450	0.993	4.60E-06	4.58E-06	nr	1.0000	nr
	Level 2	10861	0.05	1	217220		217220		4.60E-06				
	Level 3	21700	0.1	1	217000		217000		4.61E-06				
	Level 4	43524	0.2	1	217620		217620		4.60E-06				
	Level 5	89044	0.4	1	222610		222610		4.49E-06				
	Level 6	219463	1	1	219463		219463		4.56E-06				
Average CF					218560.5		218560.5						

nr - not reported
 TNB - trinitrobenzene
 DNB - dinitrobenzene
 NB - nitrobenzene
 TNT - trinitrotoluene
 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	4005	0.04	1	100125	2.48	100125	2.477	9.99E-06	1.03E-05	nr	0.9997	nr
	Level 2	9603	0.1	1	96030		96030		1.04E-05				
	Level 3	19575	0.2	1	97875		97875		1.02E-05				
	Level 4	38909	0.4	1	97272.5		97273		1.03E-05				
	Level 5	74832	0.8	1	93540		93540		1.07E-05				
	Level 6	199122	2	1	99561		99561		1.00E-05				
Average CF					97400.6		97400.7						
NB	Level 1	2740	0.02	1	137000	1.10	137000	1.1	7.30E-06	7.21E-06	nr	1.0000	nr
	Level 2	7028	0.05	1	140560		140560		7.11E-06				
	Level 3	13785	0.1	1	137850		137850		7.25E-06				
	Level 4	27482	0.2	1	137410		137410		7.28E-06				
	Level 5	56158	0.4	1	140395		140395		7.12E-06				
	Level 6	138916	1	1	138916		138916		7.20E-06				
Average CF					138688.5		138688.5						
2,4,6-TNT	Level 1	2498	0.02	1	124900	4.56	124900	4.565	8.01E-06	8.57E-06	nr	0.9995	nr
	Level 2	5934	0.05	1	118680		118680		8.43E-06				
	Level 3	11656	0.1	1	116560		116560		8.58E-06				
	Level 4	23256	0.2	1	116280		116280		8.60E-06				
	Level 5	43302	0.4	1	108255		108255		9.24E-06				
	Level 6	116807	1	1	116807		116807		8.56E-06				
Average CF					116913.7		116913.7						
2-AM-4,6-DNT	Level 1	3999	0.04	1	99975	1.23	99975	1.228	1.00E-05	1.01E-05	nr	1.0000	nr
	Level 2	10091	0.1	1	100910		100910		9.91E-06				
	Level 3	19569	0.2	1	97845		97845		1.02E-05				
	Level 4	39176	0.4	1	97940		97940		1.02E-05				
	Level 5	78734	0.8	1	98417.5		98418		1.02E-05				
	Level 6	198025	2	1	99012.5		99013		1.01E-05				
Average CF					99016.7		99016.8						
4-AM-2,6-DNT	Level 1	3061	0.04	1	76525	2.98	76525	2.980	1.31E-05	1.37E-05	nr	0.9999	nr
	Level 2	7437	0.1	1	74370		74370		1.34E-05				
	Level 3	14249	0.2	1	71245		71245		1.40E-05				
	Level 4	28395	0.4	1	70987.5		70988		1.41E-05				
	Level 5	58933	0.8	1	73666.25		73666		1.36E-05				
	Level 6	143268	2	1	71634		71634		1.40E-05				
Average CF					73071.3		73071.3						

nr - not reported
 TNB - trinitrobenzene
 DNB - dinitrobenzene
 NB - nitrobenzene
 TNT - trinitrotoluene
 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF	AVE RF		
2,4-DNT	Level 1	2726	0.02	1	136300	1.72	136300	1.716	7.34E-06	7.14E-06	nr	1.0000	nr
	Level 2	7153	0.05	1	143060		143060		6.99E-06				
	Level 3	13899	0.1	1	138990		138990		7.19E-06				
	Level 4	27813	0.2	1	139065		139065		7.19E-06				
	Level 5	56648	0.4	1	141620		141620		7.06E-06				
	Level 6	141149	1	1	141149		141149		7.08E-06				
Average CF					140030.7		140030.7						
2,6-DNT	Level 1	2710	0.04	1	67750	2.04	67750	2.037	1.48E-05	1.43E-05	nr	1.0000	nr
	Level 2	7192	0.1	1	71920		71920		1.39E-05				
	Level 3	13785	0.2	1	68925		68925		1.45E-05				
	Level 4	27719	0.4	1	69297.5		69298		1.44E-05				
	Level 5	56279	0.8	1	70348.75		70349		1.42E-05				
	Level 6	140239	2	1	70119.5		70120		1.43E-05				
Average CF					69726.8		69727.0						
2-NT	Level 1	2354	0.04	1	58850	3.16	58850	3.164	1.70E-05	1.79E-05	nr	1.0000	nr
	Level 2	5771	0.1	1	57710		57710		1.73E-05				
	Level 3	10982	0.2	1	54910		54910		1.82E-05				
	Level 4	21886	0.4	1	54715		54715		1.83E-05				
	Level 5	44345	0.8	1	55431.25		55431		1.80E-05				
	Level 6	109511	2	1	54755.5		54756		1.83E-05				
Average CF					56062.0		56062.0						
3-NT	Level 1	1869	0.04	1	46725	5.44	46725	5.441	2.14E-05	1.93E-05	nr	1.0000	nr
	Level 2	5513	0.1	1	55130		55130		1.81E-05				
	Level 3	10419	0.2	1	52095		52095		1.92E-05				
	Level 4	20870	0.4	1	52175		52175		1.92E-05				
	Level 5	42686	0.8	1	53357.5		53358		1.87E-05				
	Level 6	105552	2	1	52776		52776		1.89E-05				
Average CF					52043.1		52043.2						
4-NT	Level 1	1912	0.04	1	47800	4.06	47800	4.06	2.09E-05	2.20E-05	nr	1.0000	nr
	Level 2	4777	0.1	1	47770		47770		2.09E-05				
	Level 3	8878	0.2	1	44390		44390		2.25E-05				
	Level 4	17540	0.4	1	43850		43850		2.28E-05				
	Level 5	35827	0.8	1	44783.75		44784		2.23E-05				
	Level 6	88083	2	1	44041.5		44042		2.27E-05				
Average CF					45439.2		45439.3						

nr - not reported
 TNB - trinitrobenzene
 DNB - dinitrobenzene
 NB - nitrobenzene
 TNT - trinitrotoluene
 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 9/26/2006

SDG: 248470
Instrument: 35

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2082	0.02	1	104100	2.14	104100	2.138	9.61E-06	9.91E-06	nr	1.0000	nr
	Level 2	4919	0.05	1	98380		98380		1.02E-05				
	Level 3	9915	0.1	1	99150		99150		1.01E-05				
	Level 4	20440	0.2	1	102200		102200		9.78E-06				
	Level 5	40026	0.4	1	100065		100065		9.99E-06				
	Level 6	102047	1	1	102047		102047		9.80E-06				
Average CF					100990.3		100990.3						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1569	0.02	1	78450	2.96	78450	2.959	1.27E-05	1.21E-05	nr	0.9999	nr
	Level 2	4073	0.05	1	81460		81460		1.23E-05				
	Level 3	8197	0.1	1	81970		81970		1.22E-05				
	Level 4	16955	0.2	1	84775		84775		1.18E-05				
	Level 5	33069	0.4	1	82672.5		82673		1.21E-05				
	Level 6	85110	1	1	85110		85110		1.17E-05				
Average CF					82406.3		82406.3						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3400	0.02	1	170000	2.34	170000	2.344	5.88E-06	6.15E-06	nr	1.0000	nr
	Level 2	8048	0.05	1	160960		160960		6.21E-06				
	Level 3	15956	0.1	1	159560		159560		6.27E-06				
	Level 4	32589	0.2	1	162945		162945		6.14E-06				
	Level 5	64064	0.4	1	160160		160160		6.24E-06				
	Level 6	162521	1	1	162521		162521		6.15E-06				
Average CF					162691.0		162691.0						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2073	0.02	1	103650	2.27	103650	2.266	9.65E-06	1.01E-05	nr	1.0000	nr
	Level 2	4905	0.05	1	98100		98100		1.02E-05				
	Level 3	9833	0.1	1	98330		98330		1.02E-05				
	Level 4	19804	0.2	1	99020		99020		1.01E-05				
	Level 5	38952	0.4	1	97380		97380		1.03E-05				
	Level 6	98813	1	1	98813		98813		1.01E-05				
Average CF					99215.5		99215.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4039	0.02	1	201950	2.15	201950	2.147	4.95E-06	5.15E-06	nr	1.0000	nr
	Level 2	9508	0.05	1	190160		190160		5.26E-06				
	Level 3	19313	0.1	1	193130		193130		5.18E-06				
	Level 4	38735	0.2	1	193675		193675		5.16E-06				
	Level 5	76484	0.4	1	191210		191210		5.23E-06				
	Level 6	194623	1	1	194623		194623		5.14E-06				
Average CF					194124.7		194124.7						

nr - not reported
 TNB - trinitrobenzene
 DNB - dinitrobenzene
 NB - nitrobenzene
 TNT - trinitrotoluene
 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	3923	0.04	1	98075	3.68	98075	3.684	1.02E-05	1.09E-05	nr	1.0000	nr
	Level 2	8983	0.1	1	89830		89830		1.11E-05				
	Level 3	17815	0.2	1	89075		89075		1.12E-05				
	Level 4	36777	0.4	1	91942.5		91943		1.09E-05				
	Level 5	71473	0.8	1	89341.25		89341		1.12E-05				
	Level 6	182229	2	1	91114.5		91115		1.10E-05				
Average CF					91563.0		91563.2						
NB	Level 1	2669	0.02	1	133450	3.28	133450	3.281	7.49E-06	7.98E-06	nr	1.0000	nr
	Level 2	6095	0.05	1	121900		121900		8.20E-06				
	Level 3	12423	0.1	1	124230		124230		8.05E-06				
	Level 4	25001	0.2	1	125005		125005		8.00E-06				
	Level 5	49181	0.4	1	122952.5		122953		8.13E-06				
	Level 6	125056	1	1	125056		125056		8.00E-06				
Average CF					125432.3		125432.3						
2,4,6-TNT	Level 1	2258	0.02	1	112900	3.57	112900	3.573	8.86E-06	9.48E-06	nr	1.0000	nr
	Level 2	5198	0.05	1	103960		103960		9.62E-06				
	Level 3	10235	0.1	1	102350		102350		9.77E-06				
	Level 4	21155	0.2	1	105775		105775		9.45E-06				
	Level 5	41435	0.4	1	103587.5		103588		9.65E-06				
	Level 6	104869	1	1	104869		104869		9.54E-06				
Average CF					105573.6		105573.7						
2-AM-4,6-DNT	Level 1	3764	0.04	1	94100	2.43	94100	2.427	1.06E-05	1.11E-05	nr	1.0000	nr
	Level 2	8865	0.1	1	88650		88650		1.13E-05				
	Level 3	17611	0.2	1	88055		88055		1.14E-05				
	Level 4	36026	0.4	1	90065		90065		1.11E-05				
	Level 5	71064	0.8	1	88830		88830		1.13E-05				
	Level 6	179461	2	1	89730.5		89731		1.11E-05				
Average CF					89905.1		89905.2						
4-AM-2,6-DNT	Level 1	2731	0.04	1	68275	3.11	68275	3.109	1.46E-05	1.55E-05	nr	1.0000	nr
	Level 2	6387	0.1	1	63870		63870		1.57E-05				
	Level 3	12498	0.2	1	62490		62490		1.60E-05				
	Level 4	25713	0.4	1	64282.5		64283		1.56E-05				
	Level 5	50720	0.8	1	63400		63400		1.58E-05				
	Level 6	128196	2	1	64098		64098		1.56E-05				
Average CF					64402.6		64402.7						

nr - not reported
 TNB - trinitrobenzene
 DNB - dinitrobenzene
 NB - nitrobenzene
 TNT - trinitrotoluene
 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	2697	0.02	1	134850	4.36	134850	4.361	7.42E-06	8.08E-06	nr	1.0000	nr
	Level 2	6006	0.05	1	120120		120120		8.33E-06				
	Level 3	12157	0.1	1	121570		121570		8.23E-06				
	Level 4	24549	0.2	1	122745		122745		8.15E-06				
	Level 5	48717	0.4	1	121792.5		121793		8.21E-06				
	Level 6	122964	1	1	122964		122964		8.13E-06				
Average CF					124006.9		124007.0						
2,6-DNT	Level 1	2883	0.04	1	72075	4.23	72075	4.234	1.39E-05	1.51E-05	nr	1.0000	nr
	Level 2	6487	0.1	1	64870		64870		1.54E-05				
	Level 3	12974	0.2	1	64870		64870		1.54E-05				
	Level 4	26323	0.4	1	65807.5		65808		1.52E-05				
	Level 5	52081	0.8	1	65101.25		65101		1.54E-05				
	Level 6	131269	2	1	65634.5		65635		1.52E-05				
Average CF					66393.0		66393.2						
2-NT	Level 1	2348	0.04	1	58700	6.46	58700	6.456	1.70E-05	1.93E-05	nr	1.0000	nr
	Level 2	5117	0.1	1	51170		51170		1.95E-05				
	Level 3	10003	0.2	1	50015		50015		2.00E-05				
	Level 4	20455	0.4	1	51137.5		51138		1.96E-05				
	Level 5	40087	0.8	1	50108.75		50109		2.00E-05				
	Level 6	100912	2	1	50456		50456		1.98E-05				
Average CF					51931.2		51931.3						
3-NT	Level 1	2023	0.04	1	50575	2.74	50575	2.737	1.98E-05	2.08E-05	nr	1.0000	nr
	Level 2	4705	0.1	1	47050		47050		2.13E-05				
	Level 3	9457	0.2	1	47285		47285		2.11E-05				
	Level 4	19164	0.4	1	47910		47910		2.09E-05				
	Level 5	37792	0.8	1	47240		47240		2.12E-05				
	Level 6	95948	2	1	47974		47974		2.08E-05				
Average CF					48005.7		48005.7						
4-NT	Level 1	1794	0.04	1	44850	4.70	44850	4.0698	2.23E-05	2.44E-05	nr	1.0000	nr
	Level 2	4124	0.1	1	41240		41240		2.42E-05				
	Level 3	7890	0.2	1	39450		39450		2.53E-05				
	Level 4	16244	0.4	1	40610		40610		2.46E-05				
	Level 5	31969	0.8	1	39961.25		39961		2.50E-05				
	Level 6	81091	2	1	40545.5		40546		2.47E-05				
Average CF					41109.5		41109.5						

nr - not reported
 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 10/2/2006

SDG: 249144
Instrument: 43

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2250	0.02	1	112500	1.29	112500	1.29	8.89E-06	8.73E-06	nr	1.0000	nr
	Level 2	5672	0.05	1	113440		113440		8.82E-06				
	Level 3	11431	0.1	1	114310		114310		8.75E-06				
	Level 4	23005	0.2	1	115025		115025		8.69E-06				
	Level 5	46597	0.4	1	116492.5		116493		8.58E-06				
	Level 6	115752	1	1	115752		115752		8.64E-06				
Average CF					114586.6		114586.7						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1760	0.02	1	88000	3.53	88000	3.526	1.14E-05	1.08E-05	nr	1.0000	nr
	Level 2	4551	0.05	1	91020		91020		1.10E-05				
	Level 3	9241	0.1	1	92410		92410		1.08E-05				
	Level 4	18759	0.2	1	93795		93795		1.07E-05				
	Level 5	38735	0.4	1	96837.5		96838		1.03E-05				
	Level 6	96024	1	1	96024		96024		1.04E-05				
Average CF					93014.4		93014.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3583	0.02	1	179150	1.89	179150	1.891	5.58E-06	5.78E-06	nr	1.0000	nr
	Level 2	8721	0.05	1	174420		174420		5.73E-06				
	Level 3	17159	0.1	1	171590		171590		5.83E-06				
	Level 4	34155	0.2	1	170775		170775		5.86E-06				
	Level 5	68524	0.4	1	171310		171310		5.84E-06				
	Level 6	171016	1	1	171016		171016		5.85E-06				
Average CF					173043.5		173043.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2222	0.02	1	111100	3.06	111100	3.058	9.00E-06	9.42E-06	nr	0.9998	nr
	Level 2	5202	0.05	1	104040		104040		9.61E-06				
	Level 3	10354	0.1	1	103540		103540		9.66E-06				
	Level 4	21625	0.2	1	108125		108125		9.25E-06				
	Level 5	43119	0.4	1	107797.5		107798		9.28E-06				
	Level 6	102914	1	1	102914		102914		9.72E-06				
Average CF					106252.8		106252.8						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4253	0.02	1	212650	1.51	212650	1.509	4.70E-06	4.84E-06	nr	1.0000	nr
	Level 2	10402	0.05	1	208040		208040		4.81E-06				
	Level 3	20485	0.1	1	204850		204850		4.88E-06				
	Level 4	41009	0.2	1	205045		205045		4.88E-06				
	Level 5	81879	0.4	1	204697.5		204698		4.89E-06				
	Level 6	205533	1	1	205533		205533		4.87E-06				
Average CF					206802.6		206802.7						

nr - not reported
 TNB - trinitrobenzene
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 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	4003	0.04	1	100075	4.87	100075	4.871	9.99E-06	1.07E-05	nr	0.9996	nr
	Level 2	9532	0.1	1	95320		95320		1.05E-05				
	Level 3	19000	0.2	1	95000		95000		1.05E-05				
	Level 4	35575	0.4	1	88937.5		88938		1.12E-05				
	Level 5	70137	0.8	1	87671.25		87671		1.14E-05				
	Level 6	187392	2	1	93696		93696		1.07E-05				
Average CF					93450.0		93450.0						
NB	Level 1	2627	0.02	1	131350	2.90	131350	2.904	7.61E-06	8.06E-06	nr	1.0000	nr
	Level 2	6151	0.05	1	123020		123020		8.13E-06				
	Level 3	12271	0.1	1	122710		122710		8.15E-06				
	Level 4	24450	0.2	1	122250		122250		8.18E-06				
	Level 5	48713	0.4	1	121782.5		121783		8.21E-06				
	Level 6	123404	1	1	123404		123404		8.10E-06				
Average CF					124086.1		124086.2						
2,4,6-TNT	Level 1	2408	0.02	1	120400	7.10	120400	7.096	8.31E-06	9.32E-06	nr	0.9993	nr
	Level 2	5478	0.05	1	109560		109560		9.13E-06				
	Level 3	10840	0.1	1	108400		108400		9.23E-06				
	Level 4	19980	0.2	1	99900		99900		1.00E-05				
	Level 5	39844	0.4	1	99610		99610		1.00E-05				
	Level 6	108544	1	1	108544		108544		9.21E-06				
Average CF					107735.7		107735.7						
2-AM-4,6-DNT	Level 1	4151	0.04	1	103775	3.36	103775	3.355	9.64E-06	1.03E-05	nr	1.0000	nr
	Level 2	9577	0.1	1	95770		95770		1.04E-05				
	Level 3	19096	0.2	1	95480		95480		1.05E-05				
	Level 4	38217	0.4	1	95542.5		95543		1.05E-05				
	Level 5	77131	0.8	1	96413.75		96414		1.04E-05				
	Level 6	191910	2	1	95955		95955		1.04E-05				
Average CF					97156.0		97156.2						
4-AM-2,6-DNT	Level 1	3061	0.04	1	76525	3.18	76525	3.179	1.31E-05	1.36E-05	nr	0.9997	nr
	Level 2	7097	0.1	1	70970		70970		1.41E-05				
	Level 3	14362	0.2	1	71810		71810		1.39E-05				
	Level 4	29862	0.4	1	74655		74655		1.34E-05				
	Level 5	60441	0.8	1	75561.25		75561		1.32E-05				
	Level 6	143323	2	1	71661.5		71662		1.40E-05				
Average CF					73528.8		73528.8						

nr - not reported
 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	2848	0.02	1	142400	5.16	142400	5.165	7.02E-06	7.78E-06	nr	1.0000	nr
	Level 2	6310	0.05	1	126200		126200		7.92E-06				
	Level 3	12562	0.1	1	125620		125620		7.96E-06				
	Level 4	25293	0.2	1	126465		126465		7.91E-06				
	Level 5	50397	0.4	1	125992.5		125993		7.94E-06				
	Level 6	126309	1	1	126309		126309		7.92E-06				
Average CF					128831.1		128831.2						
2,6-DNT	Level 1	3005	0.04	1	75125	3.18	75125	3.181	1.33E-05	1.42E-05	nr	1.0000	nr
	Level 2	6941	0.1	1	69410		69410		1.44E-05				
	Level 3	13924	0.2	1	69620		69620		1.44E-05				
	Level 4	27997	0.4	1	69992.5		69993		1.43E-05				
	Level 5	55610	0.8	1	69512.5		69513		1.44E-05				
	Level 6	139410	2	1	69705		69705		1.43E-05				
Average CF					70560.8		70561.0						
2-NT	Level 1	2398	0.04	1	59950	7.67	59950	7.666	1.67E-05	1.93E-05	nr	1.0000	nr
	Level 2	5179	0.1	1	51790		51790		1.93E-05				
	Level 3	10042	0.2	1	50210		50210		1.99E-05				
	Level 4	20109	0.4	1	50272.5		50273		1.99E-05				
	Level 5	39696	0.8	1	49620		49620		2.02E-05				
	Level 6	99880	2	1	49940		49940		2.00E-05				
Average CF					51963.8		51963.8						
3-NT	Level 1	2182	0.04	1	54550	6.81	54550	6.807	1.83E-05	2.09E-05	nr	1.0000	nr
	Level 2	4705	0.1	1	47050		47050		2.13E-05				
	Level 3	9326	0.2	1	46630		46630		2.14E-05				
	Level 4	18647	0.4	1	46617.5		46618		2.15E-05				
	Level 5	36918	0.8	1	46147.5		46148		2.17E-05				
	Level 6	93025	2	1	46512.5		46513		2.15E-05				
Average CF					47917.9		47918.2						
4-NT	Level 1	1914	0.04	1	47850	8.88	47850	8.879	2.09E-05	2.48E-05	nr	1.0000	nr
	Level 2	3982	0.1	1	39820		39820		2.51E-05				
	Level 3	7852	0.2	1	39260		39260		2.55E-05				
	Level 4	15621	0.4	1	39052.5		39053		2.56E-05				
	Level 5	30892	0.8	1	38615		38615		2.59E-05				
	Level 6	77440	2	1	38720		38720		2.58E-05				
Average CF					40552.9		40553.0						

nr - not reported
 TNB - trinitrobenzene
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 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 10/3/2006

SDG: 249025
Instrument: 35

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2445	0.02	1	122250	3.47	122250	3.472	8.18E-06	8.71E-06	nr	1.0000	nr
	Level 2	5547	0.05	1	110940		110940		9.01E-06				
	Level 3	11261	0.1	1	112610		112610		8.88E-06				
	Level 4	23293	0.2	1	116465		116465		8.59E-06				
	Level 5	45453	0.4	1	113632.5		113633		8.80E-06				
	Level 6	114033	1	1	114033		114033		8.77E-06				
Average CF					114988.4		114988.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1984	0.02	1	99200	3.90	99200	3.902	1.01E-05	1.08E-05	nr	1.0000	nr
	Level 2	4511	0.05	1	90220		90220		1.11E-05				
	Level 3	8884	0.1	1	88840		88840		1.13E-05				
	Level 4	18720	0.2	1	93600		93600		1.07E-05				
	Level 5	37217	0.4	1	93042.5		93043		1.07E-05				
	Level 6	91570	1	1	91570		91570		1.09E-05				
Average CF					92745.4		92745.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3949	0.02	1	197450	2.32	197450	2.316	5.06E-06	5.28E-06	nr	1.0000	nr
	Level 2	9220	0.05	1	184400		184400		5.42E-06				
	Level 3	18924	0.1	1	189240		189240		5.28E-06				
	Level 4	37584	0.2	1	187920		187373		5.32E-06				
	Level 5	74949	0.4	1	187372.5		189462		5.34E-06				
	Level 6	189462	1	1	189462		162521		5.28E-06				
Average CF					189307.4		185074.3						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2348	0.02	1	117400	1.75	117400	1.747	8.52E-06	8.80E-06	nr	1.0000	nr
	Level 2	5658	0.05	1	113160		113160		8.84E-06				
	Level 3	11148	0.1	1	111480		111480		8.97E-06				
	Level 4	22689	0.2	1	113445		113445		8.81E-06				
	Level 5	45219	0.4	1	113047.5		113048		8.85E-06				
	Level 6	113111	1	1	113111		113100		8.84E-06				
Average CF					113607.3		113605.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4675	0.02	1	233750	2.82	233750	2.812	4.28E-06	4.48E-06	nr	1.0000	nr
	Level 2	10698	0.05	1	213960		213960		4.67E-06				
	Level 3	22248	0.1	1	222480		222480		4.49E-06				
	Level 4	44622	0.2	1	223110		223110		4.48E-06				
	Level 5	89001	0.4	1	222502.5		222503		4.49E-06				
	Level 6	223774	1	1	223774		223774		4.47E-06				
Average CF					223262.8		223262.8						

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	4420	0.04	1	110500	3.55	110500	3.578	9.05E-06	9.46E-06	nr	0.9999	nr
	Level 2	9969	0.1	1	99690		99690		1.00E-05				
	Level 3	21703	0.2	1	108515		108515		9.22E-06				
	Level 4	42070	0.4	1	105175		105175		9.51E-06				
	Level 5	83381	0.8	1	104226.25		104226		9.59E-06				
	Level 6	213315	2	1	106657.5		106658		9.38E-06				
Average CF					105794.0		105794.0						
NB	Level 1	3060	0.02	1	153000	3.02	153000	3.024	6.54E-06	6.88E-06	nr	1.0000	nr
	Level 2	6972	0.05	1	139440		139440		7.17E-06				
	Level 3	14610	0.1	1	146100		146100		6.84E-06				
	Level 4	28901	0.2	1	144505		144505		6.92E-06				
	Level 5	57579	0.4	1	143947.5		143948		6.95E-06				
	Level 6	145338	1	1	145338		145338		6.88E-06				
Average CF					145388.4		145388.5						
2,4,6-TNT	Level 1	2500	0.02	1	125000	2.12	125000	2.124	8.00E-06	8.16E-06	nr	1.0000	nr
	Level 2	5935	0.05	1	118700		118700		8.42E-06				
	Level 3	12543	0.1	1	125430		125430		7.97E-06				
	Level 4	24256	0.2	1	121280		121280		8.25E-06				
	Level 5	48525	0.4	1	121312.5		121313		8.24E-06				
	Level 6	123832	1	1	123832		123832		8.08E-06				
Average CF					122592.4		122592.5						
2-AM-4,6-DNT	Level 1	4081	0.04	1	102025	1.26	102025	1.263	9.80E-06	9.69E-06	nr	1.0000	nr
	Level 2	10180	0.1	1	101800		101800		9.82E-06				
	Level 3	21021	0.2	1	105105		105105		9.51E-06				
	Level 4	41220	0.4	1	103050		103050		9.70E-06				
	Level 5	82331	0.8	1	102913.75		102914		9.72E-06				
	Level 6	208793	2	1	104396.5		104397		9.58E-06				
Average CF					103215.0		103215.2						
4-AM-2,6-DNT	Level 1	2885	0.04	1	72125	1.32	72125	1.316	1.39E-05	1.36E-05	nr	1.0000	nr
	Level 2	7352	0.1	1	73520		73520		1.36E-05				
	Level 3	14996	0.2	1	74980		74980		1.33E-05				
	Level 4	29381	0.4	1	73452.5		73453		1.36E-05				
	Level 5	58749	0.8	1	73436.25		73436		1.36E-05				
	Level 6	148711	2	1	74355.5		74356		1.34E-05				
Average CF					73644.9		73645.0						

nr - not reported
 TNB - trinitrobenzene
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 DNT - dinitrotoluene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	2810	0.02	1	140500	2.75	140500	2.75	7.12E-06	7.16E-06	nr	0.9999	nr
	Level 2	6661	0.05	1	133220		133220		7.51E-06				
	Level 3	14417	0.1	1	144170		144170		6.94E-06				
	Level 4	27818	0.2	1	139090		139090		7.19E-06				
	Level 5	55651	0.4	1	139127.5		139128		7.19E-06				
	Level 6	142985	1	1	142985		142965		6.99E-06				
Average CF					139848.8		139845.5						
2,6-DNT	Level 1	2980	0.04	1	74500	2.24	74500	2.243	1.34E-05	1.33E-05	nr	0.9999	nr
	Level 2	7269	0.1	1	72690		72690		1.38E-05				
	Level 3	15483	0.2	1	77415		77415		1.29E-05				
	Level 4	29835	0.4	1	74587.5		74588		1.34E-05				
	Level 5	59644	0.8	1	74555		74555		1.34E-05				
	Level 6	153097	2	1	76548.5		76549		1.31E-05				
Average CF					75049.3		75049.5						
2-NT	Level 1	2496	0.04	1	62400	2.17	62400	2.172	1.60E-05	1.65E-05	nr	1.0000	nr
	Level 2	5888	0.1	1	58880		58880		1.70E-05				
	Level 3	12364	0.2	1	61820		61820		1.62E-05				
	Level 4	23914	0.4	1	59785		59785		1.67E-05				
	Level 5	48136	0.8	1	60170		60170		1.66E-05				
	Level 6	122077	2	1	61038.5		61039		1.64E-05				
Average CF					60682.3		60682.3						
3-NT	Level 1	2510	0.04	1	62750	5.06	62750	5.063	1.59E-05	1.73E-05	nr	0.9999	nr
	Level 2	5411	0.1	1	54110		54110		1.85E-05				
	Level 3	11767	0.2	1	58835		58835		1.70E-05				
	Level 4	22508	0.4	1	56270		56270		1.78E-05				
	Level 5	45399	0.8	1	56748.75		56749		1.76E-05				
	Level 6	116598	2	1	58299		58299		1.72E-05				
Average CF					57835.5		57835.5						
4-NT	Level 1	1974	0.04	1	49350	2.07	49350	2.073	2.03E-05	2.05E-05	nr	0.9999	nr
	Level 2	4763	0.1	1	47630		47630		2.10E-05				
	Level 3	10000	0.2	1	50000		50000		2.00E-05				
	Level 4	19107	0.4	1	47767.5		47768		2.09E-05				
	Level 5	38543	0.8	1	48178.75		48179		2.08E-05				
	Level 6	99094	2	1	49547		49547		2.02E-05				
Average CF					48745.5		48745.7						

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 10/20/2006

SDG: 249183
Instrument: 35

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2337	0.02	1	116850	2.37	116850	2.373	8.56E-06	8.95E-06	nr	1.0000	nr
	Level 2	5492	0.05	1	109840		109840		9.10E-06				
	Level 3	11033	0.1	1	110330		110330		9.06E-06				
	Level 4	21982	0.2	1	109910		109910		9.10E-06				
	Level 5	44688	0.4	1	111720		111720		8.95E-06				
	Level 6	112108	1	1	112108		112108		8.92E-06				
Average CF					111793.0		111793.0						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1730	0.02	1	86500	2.84	86500	2.837	1.16E-05	1.13E-05	nr	1.0000	nr
	Level 2	4302	0.05	1	86040		86040		1.16E-05				
	Level 3	8898	0.1	1	88980		88980		1.12E-05				
	Level 4	17651	0.2	1	88255		88255		1.13E-05				
	Level 5	36699	0.4	1	91747.5		91748		1.09E-05				
	Level 6	91958	1	1	91958		91958		1.09E-05				
Average CF					88913.4		88913.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3867	0.02	1	193350	3.12	193350	3.124	5.17E-06	5.50E-06	nr	1.0000	nr
	Level 2	9016	0.05	1	180320		180320		5.55E-06				
	Level 3	17784	0.1	1	177840		177840		5.62E-06				
	Level 4	35871	0.2	1	179355		179355		5.58E-06				
	Level 5	72026	0.4	1	180065		180065		5.55E-06				
	Level 6	180627	1	1	180627		180627		5.54E-06				
Average CF					181926.2		181926.2						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2336	0.02	1	116800	2.98	116800	2.983	8.56E-06	9.08E-06	nr	1.0000	nr
	Level 2	5474	0.05	1	109480		109480		9.13E-06				
	Level 3	10791	0.1	1	107910		107910		9.27E-06				
	Level 4	21704	0.2	1	108520		108520		9.21E-06				
	Level 5	43725	0.4	1	109312.5		109313		9.15E-06				
	Level 6	109162	1	1	109162		109162		9.16E-06				
Average CF					110197.4		110197.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4593	0.02	1	229650	2.90	229650	2.905	4.35E-06	4.61E-06	nr	1.0000	nr
	Level 2	10667	0.05	1	213340		213340		4.69E-06				
	Level 3	21331	0.1	1	213310		213310		4.69E-06				
	Level 4	42792	0.2	1	213960		213960		4.67E-06				
	Level 5	86330	0.4	1	215825		215825		4.63E-06				
	Level 6	215981	1	1	215981		215981		4.63E-06				
Average CF					217011.0		217011.0						

nr - not reported
 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported		Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF	RF	AVE RF		
TETRYL	Level 1	4466	0.04	1	111650	4.11	111650	4.108	8.96E-06	9.69E-06	nr	1.0000	nr	
	Level 2	10111	0.1	1	100110		100110		9.89E-06					
	Level 3	20196	0.2	1	100980		100980		9.90E-06					
	Level 4	40825	0.4	1	102062.5		102063		9.80E-06					
	Level 5	81288	0.8	1	101610		101610		9.84E-06					
	Level 6	205565	2	1	102782.5		102783		9.73E-06					
Average CF					103199.2		103199.3							
NB	Level 1	3061	0.02	1	153050	4.07	153050	4.066	6.53E-06	7.07E-06	nr	1.0000	nr	
	Level 2	7027	0.05	1	140540		140540		7.12E-06					
	Level 3	13718	0.1	1	137180		137180		7.29E-06					
	Level 4	27845	0.2	1	139225		139225		7.18E-06					
	Level 5	55740	0.4	1	139350		139350		7.18E-06					
	Level 6	139831	1	1	139831		139831		7.15E-06					
Average CF					141529.3		141529.3							
2,4,6-TNT	Level 1	2859	0.02	1	142950	8.78	142950	8.776	7.00E-06	8.29E-06	nr	1.0000	nr	
	Level 2	5836	0.05	1	116720		116760		8.57E-06					
	Level 3	11489	0.1	1	114890		114890		8.70E-06					
	Level 4	23508	0.2	1	117540		117540		8.51E-06					
	Level 5	46976	0.4	1	117440		117440		8.51E-06					
	Level 6	118525	1	1	118525		118525		8.44E-06					
Average CF					121344.2		121350.8							
2-AM-4,6-DNT	Level 1	4661	0.04	1	116525	7.30	116525	7.305	8.58E-06	9.87E-06	nr	0.9999	nr	
	Level 2	9876	0.1	1	98760		98760		1.01E-05					
	Level 3	19426	0.2	1	97130		97130		1.03E-05					
	Level 4	38676	0.4	1	96690		96690		1.03E-05					
	Level 5	80356	0.8	1	100445		100445		9.96E-06					
	Level 6	202174	2	1	101087		101087		9.89E-06					
Average CF					101772.8		101772.8							
4-AM-2,6-DNT	Level 1	3429	0.04	1	85725	8.42	85725	8.421	1.17E-05	1.37E-05	nr	1.0000	nr	
	Level 2	7021	0.1	1	70210		70210		1.42E-05					
	Level 3	13878	0.2	1	69390		69390		1.44E-05					
	Level 4	28213	0.4	1	70532.5		70533		1.42E-05					
	Level 5	57558	0.8	1	71947.5		71948		1.39E-05					
	Level 6	143923	2	1	71961.5		71962		1.39E-05					
Average CF					73294.4		73294.7							

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 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported		Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF	AVE RF	AVE RF		
2,4-DNT	Level 1	3015	0.02	1	150750	4.68	150750	4.678	6.63E-06	7.27E-06	nr	1.0000	nr	
	Level 2	6724	0.05	1	134480		134480		7.44E-06					
	Level 3	13371	0.1	1	133710		133710		7.48E-06					
	Level 4	27178	0.2	1	135890		135890		7.36E-06					
	Level 5	54097	0.4	1	135242.5		135242.5		7.39E-06					
	Level 6	136402	1	1	136402		136402		7.33E-06					
Average CF					137745.8		137745.8							
2,6-DNT	Level 1	3366	0.04	1	84150	6.84	84150	6.844	1.19E-05	1.36E-05	nr	1.0000	nr	
	Level 2	7229	0.1	1	72290		72290		1.38E-05					
	Level 3	14097	0.2	1	70485		70485		1.42E-05					
	Level 4	28632	0.4	1	71580		71580		1.40E-05					
	Level 5	57797	0.8	1	72246.25		72246.25		1.38E-05					
	Level 6	146103	2	1	73051.5		73052		1.37E-05					
Average CF					73967.1		73967.2							
2-NT	Level 1	2420	0.04	1	60500	2.62	60500	2.616	1.65E-05	1.74E-05	nr	1.0000	nr	
	Level 2	5681	0.1	1	56810		56810		1.76E-05					
	Level 3	11365	0.2	1	56825		56825		1.76E-05					
	Level 4	22787	0.4	1	56967.5		56968		1.76E-05					
	Level 5	45159	0.8	1	56448.75		56449		1.77E-05					
	Level 6	115039	2	1	57519.5		57520		1.74E-05					
Average CF					57511.8		57512.0							
3-NT	Level 1	2275	0.04	1	56875	1.91	56875	1.909	1.76E-05	1.81E-05	nr	1.0000	nr	
	Level 2	5592	0.1	1	55920		55920		1.79E-05					
	Level 3	10812	0.2	1	54060		54060		1.85E-05					
	Level 4	21965	0.4	1	54912.5		54913		1.82E-05					
	Level 5	43423	0.8	1	54278.75		54279		1.84E-05					
	Level 6	110463	2	1	55231.5		55232		1.81E-05					
Average CF					55213.0		55213.2							
4-NT	Level 1	2043	0.04	1	51075	4.30	51075	4.301	1.96E-05	2.13E-05	nr	1.0000	nr	
	Level 2	4566	0.1	1	45660		45660		2.19E-05					
	Level 3	9322	0.2	1	46610		46610		2.15E-05					
	Level 4	18562	0.4	1	46405		46405		2.15E-05					
	Level 5	36891	0.8	1	45863.75		45864		2.18E-05					
	Level 6	92993	2	1	46496.5		46497		2.15E-05					
Average CF					47018.4		47018.5							

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 10/29/2006

SDG: 249398
Instrument: 35

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2003	0.02	1	100150	2.00	100150	2.004	9.99E-06	1.01E-05	nr	0.9998	nr
	Level 2	4851	0.05	1	97020		97020		1.03E-05				
	Level 3	9817	0.1	1	98170		98170		1.02E-05				
	Level 4	19648	0.2	1	98240		98240		1.02E-05				
	Level 5	41048	0.4	1	102620		102620		9.74E-06				
	Level 6	98544	1	1	98544		98544		1.01E-05				
Average CF					99124.0		99124.0						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1623	0.02	1	81150	2.26	81150	2.256	1.23E-05	1.24E-05	nr	0.9999	nr
	Level 2	3966	0.05	1	79320		79320		1.26E-05				
	Level 3	7900	0.1	1	79000		79000		1.27E-05				
	Level 4	16005	0.2	1	80025		80025		1.25E-05				
	Level 5	33609	0.4	1	84022.5		84023		1.19E-05				
	Level 6	81058	1	1	81058		81058		1.23E-05				
Average CF					80762.6		80762.7						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3203	0.02	1	160150	2.89	160150	2.888	6.24E-06	6.50E-06	nr	0.9998	nr
	Level 2	7616	0.05	1	152320		152320		6.57E-06				
	Level 3	14925	0.1	1	149250		149250		6.70E-06				
	Level 4	30193	0.2	1	150965		150965		6.62E-06				
	Level 5	63500	0.4	1	158750		158750		6.30E-06				
	Level 6	152032	1	1	152032		152032		6.58E-06				
Average CF					153911.2		153911.2						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	1994	0.02	1	99700	4.16	99700	4.164	1.00E-05	1.08E-05	nr	0.9998	nr
	Level 2	4514	0.05	1	90280		90280		1.11E-05				
	Level 3	9007	0.1	1	90070		90070		1.11E-05				
	Level 4	18146	0.2	1	90730		90730		1.10E-05				
	Level 5	38084	0.4	1	95210		95210		1.05E-05				
	Level 6	91011	1	1	91011		91011		1.10E-05				
Average CF					92833.5		92833.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	3793	0.02	1	189650	2.97	189650	2.968	5.27E-06	5.47E-06	nr	0.9997	nr
	Level 2	8993	0.05	1	179860		179860		5.56E-06				
	Level 3	17814	0.1	1	178140		178140		5.61E-06				
	Level 4	35804	0.2	1	179020		179020		5.59E-06				
	Level 5	75940	0.4	1	189850		189850		5.27E-06				
	Level 6	180360	1	1	180360		180360		5.54E-06				
Average CF					182813.3		182813.3						

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	3468	0.04	1	86700	3.09	86700	3.087	1.15E-05	1.19E-05	nr	0.9997	nr
	Level 2	8197	0.1	1	81970		81970		1.22E-05				
	Level 3	16452	0.2	1	82260		82260		1.22E-05				
	Level 4	33191	0.4	1	82977.5		82978		1.21E-05				
	Level 5	70689	0.8	1	88361.25		88361		1.13E-05				
	Level 6	167495	2	1	83747.5		83748		1.19E-05				
Average CF					84336.0		84336.2						
NB	Level 1	2535	0.02	1	126750	3.99	126750	3.989	7.89E-06	8.41E-06	nr	0.9997	nr
	Level 2	5846	0.05	1	116920		116920		8.55E-06				
	Level 3	11431	0.1	1	114310		114310		8.75E-06				
	Level 4	23372	0.2	1	116860		116860		8.56E-06				
	Level 5	49131	0.4	1	122827.5		122828		8.14E-06				
	Level 6	116344	1	1	116344		116344		8.60E-06				
Average CF					119001.9		119002.0						
2,4,6-TNT	Level 1	2028	0.02	1	101400	3.81	101400	3.806	9.86E-06	1.04E-05	nr	0.9997	nr
	Level 2	4748	0.05	1	94960		94960		1.05E-05				
	Level 3	9391	0.1	1	93910		93910		1.06E-05				
	Level 4	18363	0.2	1	91815		91815		1.09E-05				
	Level 5	39915	0.4	1	99787.5		99788		1.00E-05				
	Level 6	95168	1	1	95168		95168		1.05E-05				
Average CF					96173.4		96173.5						
2-AM-4,6-DNT	Level 1	3532	0.04	1	88300	3.37	88300	3.371	1.13E-05	1.19E-05	nr	0.9998	nr
	Level 2	8225	0.1	1	82250		82250		1.22E-05				
	Level 3	16295	0.2	1	81475		81475		1.23E-05				
	Level 4	32725	0.4	1	81812.5		81813		1.22E-05				
	Level 5	69369	0.8	1	86711.25		86699		1.15E-05				
	Level 6	167310	2	1	83655		83655		1.20E-05				
Average CF					84034.0		84032.0						
4-AM-2,6-DNT	Level 1	2580	0.04	1	64500	4.76	64500	4.759	1.55E-05	1.67E-05	nr	0.9998	nr
	Level 2	5880	0.1	1	58800		58800		1.70E-05				
	Level 3	11313	0.2	1	56565		56565		1.77E-05				
	Level 4	23311	0.4	1	58277.5		58278		1.72E-05				
	Level 5	49617	0.8	1	62021.25		62021		1.61E-05				
	Level 6	119174	2	1	59587		59587		1.68E-05				
Average CF					59958.5		59958.5						

nr - not reported
 TNB - trinitrobenzene
 DNB - dinitrobenzene
 NB - nitrobenzene
 TNT - trinitrotoluene
 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	2356	0.02	1	117800	2.60	117800	2.597	8.49E-06	8.74E-06	nr	0.9998	nr
	Level 2	5770	0.05	1	115400		115400		8.67E-06				
	Level 3	11057	0.1	1	110570		110570		9.04E-06				
	Level 4	22414	0.2	1	112070		112070		8.92E-06				
	Level 5	47059	0.4	1	117647.5		117648		8.50E-06				
	Level 6	113386	1	1	113386		113386		8.82E-06				
Average CF					114478.9		114479.0						
2,6-DNT	Level 1	2485	0.04	1	62125	2.60	62125	2.601	1.61E-05	1.66E-05	nr	0.9998	nr
	Level 2	6090	0.1	1	60900		60900		1.64E-05				
	Level 3	11681	0.2	1	58405		58405		1.71E-05				
	Level 4	23612	0.4	1	59030		59030		1.69E-05				
	Level 5	49687	0.8	1	62108.75		62109		1.61E-05				
	Level 6	119636	2	1	59818		59818		1.67E-05				
Average CF					60397.8		60397.8						
2-NT	Level 1	1982	0.04	1	49550	2.89	49550	2.892	2.02E-05	2.11E-05	nr	0.9998	nr
	Level 2	4790	0.1	1	47900		47900		2.09E-05				
	Level 3	9282	0.2	1	46410		46410		2.15E-05				
	Level 4	18410	0.4	1	46025		46025		2.17E-05				
	Level 5	38757	0.8	1	48446.25		48446		2.06E-05				
	Level 6	93202	2	1	46601		46601		2.15E-05				
Average CF					47488.7		47488.7						
3-NT	Level 1	1669	0.04	1	41725	3.51	41725	3.511	2.40E-05	2.28E-05	nr	0.9998	nr
	Level 2	4425	0.1	1	44250		44250		2.26E-05				
	Level 3	8583	0.2	1	42915		42915		2.33E-05				
	Level 4	17526	0.4	1	43815		43815		2.28E-05				
	Level 5	37070	0.8	1	46337.5		46338		2.16E-05				
	Level 6	88412	2	1	44206		44206		2.26E-05				
Average CF					43874.8		43874.8						
4-NT	Level 1	1507	0.04	1	37675	1.72	37675	1.717	2.65E-05	2.65E-05	nr	0.9999	nr
	Level 2	3807	0.1	1	38070		38070		2.63E-05				
	Level 3	7455	0.2	1	37275		37275		2.68E-05				
	Level 4	14823	0.4	1	37057.5		37058		2.70E-05				
	Level 5	31070	0.8	1	38837.5		38838		2.57E-05				
	Level 6	74846	2	1	37423		37423		2.67E-05				
Average CF					37723.0		37723.2						

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 TNB - trinitrobenzene
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 TNT - trinitrotoluene
 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 11/10/2006

SDG: 249477, 249602, 249776, 249944, 250165
Instrument: 43

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2513	0.02	1	125650	5.12	125650	5.124	7.96E-06	8.78E-06	nr	0.9999	nr
	Level 2	5546	0.05	1	110920		110920		9.02E-06				
	Level 3	11148	0.1	1	111480		111480		8.97E-06				
	Level 4	21983	0.2	1	109915		109915		9.10E-06				
	Level 5	45895	0.4	1	114737.5		114738		8.72E-06				
	Level 6	112397	1	1	112397		112397		8.90E-06				
Average CF					114183.3		114183.3						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1788	0.02	1	89400	1.98	89400	1.981	1.12E-05	1.08E-05	nr	1.0000	nr
	Level 2	4627	0.05	1	92540		92540		1.08E-05				
	Level 3	9433	0.1	1	94330		94330		1.06E-05				
	Level 4	18307	0.2	1	91535		91535		1.09E-05				
	Level 5	37673	0.4	1	94182.5		94183		1.06E-05				
	Level 6	92753	1	1	92753		92453		1.08E-05				
Average CF					92456.8		92406.8						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3710	0.02	1	185500	2.29	185500	2.287	5.39E-06	5.58E-06	nr	0.9999	nr
	Level 2	8827	0.05	1	176540		176540		5.66E-06				
	Level 3	17755	0.1	1	177550		177550		5.63E-06				
	Level 4	34911	0.2	1	174555		174555		5.73E-06				
	Level 5	73108	0.4	1	182770		182770		5.47E-06				
	Level 6	178706	1	1	178706		178706		5.60E-06				
Average CF					179270.2		179270.2						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2276	0.02	1	113800	4.57	113800	4.575	8.79E-06	9.59E-06	nr	0.9999	nr
	Level 2	5136	0.05	1	102720		102720		9.74E-06				
	Level 3	10275	0.1	1	102750		102750		9.73E-06				
	Level 4	20096	0.2	1	100480		100475		9.95E-06				
	Level 5	41924	0.4	1	104810		104810		9.54E-06				
	Level 6	102221	1	1	102221		102221		9.78E-06				
Average CF					104463.5		104462.7						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4360	0.02	1	218000	2.44	218000	2.441	4.59E-06	4.77E-06	nr	0.9999	nr
	Level 2	10426	0.05	1	208520		208520		4.80E-06				
	Level 3	20697	0.1	1	206970		206970		4.83E-06				
	Level 4	40692	0.2	1	203460		203460		4.91E-06				
	Level 5	85179	0.4	1	212947.5		212948		4.70E-06				
	Level 6	207779	1	1	207779		207779		4.81E-06				
Average CF					209612.8		209612.8						

nr - not reported
 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	4171	0.04	1	104275	3.17	104275	3.171	9.59E-06	1.00E-05	nr	0.9999	nr
	Level 2	9717	0.1	1	97170		97170		1.03E-05				
	Level 3	19653	0.2	1	98265		98265		1.02E-05				
	Level 4	38784	0.4	1	96960		96960		1.03E-05				
	Level 5	82708	0.8	1	103385		103385		9.67E-06				
	Level 6	201401	2	1	100700.5		100701		9.93E-06				
Average CF					100125.9		100126.0						
NB	Level 1	2658	0.02	1	132900	2.91	132900	2.912	7.52E-06	7.88E-06	nr	0.9999	nr
	Level 2	6212	0.05	1	124240		124240		8.05E-06				
	Level 3	12506	0.1	1	125060		125060		8.00E-06				
	Level 4	24652	0.2	1	123260		123260		8.11E-06				
	Level 5	51907	0.4	1	129767.5		129768		7.71E-06				
	Level 6	126299	1	1	126299		126299		7.92E-06				
Average CF					126921.1		126921.2						
2,4,6-TNT	Level 1	2357	0.02	1	117850	2.93	117850	2.935	8.49E-06	8.88E-06	nr	0.9999	nr
	Level 2	5521	0.05	1	110420		110420		9.06E-06				
	Level 3	11101	0.1	1	111010		111010		9.01E-06				
	Level 4	21823	0.2	1	109115		109115		9.16E-06				
	Level 5	46155	0.4	1	115387.5		115388		8.67E-06				
	Level 6	112465	1	1	112465		112465		8.89E-06				
Average CF					112707.9		112708.0						
2-AM-4,6-DNT	Level 1	4100	0.04	1	102500	2.53	102500	2.531	9.76E-06	1.02E-05	nr	0.9999	nr
	Level 2	9696	0.1	1	96960		96960		1.03E-05				
	Level 3	19501	0.2	1	97505		97505		1.03E-05				
	Level 4	38156	0.4	1	95390		95390		1.05E-05				
	Level 5	79392	0.8	1	99240		99240		1.01E-05				
	Level 6	194035	2	1	97017.5		97018		1.03E-05				
Average CF					98102.1		98102.2						
4-AM-2,6-DNT	Level 1	3003	0.04	1	75075	2.43	75075	2.432	1.33E-05	1.39E-05	nr	1.0000	nr
	Level 2	7083	0.1	1	70830		70830		1.41E-05				
	Level 3	14335	0.2	1	71675		71675		1.40E-05				
	Level 4	28065	0.4	1	70162.5		70163		1.43E-05				
	Level 5	58099	0.8	1	72623.75		72624		1.38E-05				
	Level 6	142400	2	1	71200		71200		1.40E-05				
Average CF					71927.7		71927.8						

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 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	2853	0.02	1	142650	4.26	142650	4.26	7.01E-06	7.58E-06	nr	0.9999	nr
	Level 2	6453	0.05	1	129060		129060		7.75E-06				
	Level 3	12921	0.1	1	129210		129210		7.74E-06				
	Level 4	25472	0.2	1	127360		127360		7.85E-06				
	Level 5	53731	0.4	1	134327.5		134328		7.44E-06				
	Level 6	130579	1	1	130579		130579		7.66E-06				
Average CF					132197.8		132197.8						
2,6-DNT	Level 1	3033	0.04	1	75825	3.34	75825	3.341	1.32E-05	1.40E-05	nr	0.9999	nr
	Level 2	7120	0.1	1	71200		71200		1.40E-05				
	Level 3	14078	0.2	1	70390		70390		1.42E-05				
	Level 4	27568	0.4	1	68920		68920		1.45E-05				
	Level 5	58304	0.8	1	72880		72880		1.37E-05				
	Level 6	141866	2	1	70933		70933		1.41E-05				
Average CF					71691.3		71691.3						
2-NT	Level 1	2233	0.04	1	55825	3.55	55825	3.554	1.79E-05	1.91E-05	nr	0.9999	nr
	Level 2	5127	0.1	1	51270		51270		1.95E-05				
	Level 3	10342	0.2	1	51710		51710		1.93E-05				
	Level 4	20294	0.4	1	50735		50735		1.97E-05				
	Level 5	42797	0.8	1	53496.25		53496		1.87E-05				
	Level 6	104271	2	1	52135.5		52136		1.92E-05				
Average CF					52528.6		52528.7						
3-NT	Level 1	2168	0.04	1	54200	5.08	54200	5.076	1.85E-05	2.02E-05	nr	0.9999	nr
	Level 2	4826	0.1	1	48260		48260		2.07E-05				
	Level 3	9544	0.2	1	47720		47720		2.10E-05				
	Level 4	19047	0.4	1	47617.5		46718		2.10E-05				
	Level 5	40510	0.8	1	50637.5		50538		1.97E-05				
	Level 6	98315	2	1	49157.5		49158		2.03E-05				
Average CF					49598.8		49432.3						
4-NT	Level 1	1832	0.04	1	45800	5.54	45800	5.543	2.18E-05	2.42E-05	nr	0.9999	nr
	Level 2	3969	0.1	1	39690		39690		2.52E-05				
	Level 3	8084	0.2	1	40420		40420		2.47E-05				
	Level 4	15926	0.4	1	39815		39815		2.51E-05				
	Level 5	33712	0.8	1	42140		42140		2.37E-05				
	Level 6	82001	2	1	41000.5		41001		2.44E-05				
Average CF					41477.6		41477.7						

nr - not reported
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 2/23/2007

SDG: 250253, 250262, 250274, 250285, 250340, 250332
Instrument: 35

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2049	0.02	1	102450	2.50	102450	2.497	9.76E-06	9.36E-06	nr	1.0000	nr
	Level 2	5308	0.05	1	106160		106160		9.42E-06				
	Level 3	10697	0.1	1	106970		106970		9.35E-06				
	Level 4	21360	0.2	1	106800		106800		9.36E-06				
	Level 5	44049	0.4	1	110122.5		110123		9.08E-06				
	Level 6	109117	1	1	109117		109117		9.16E-06				
Average CF					106936.6		106770.0						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1657	0.02	1	82850	2.96	82850	2.962	1.21E-05	1.16E-05	nr	0.9999	nr
	Level 2	4203	0.05	1	84060		84060		1.19E-05				
	Level 3	8557	0.1	1	85570		85570		1.17E-05				
	Level 4	17114	0.2	1	85570		85570		1.17E-05				
	Level 5	36015	0.4	1	90037.5		90038		1.11E-05				
	Level 6	87438	1	1	87438		87438		1.14E-05				
Average CF					85920.9		85921.0						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3513	0.02	1	175650	1.21	175650	1.211	5.69E-06	5.62E-06	nr	0.9999	nr
	Level 2	8942	0.05	1	178840		178840		5.59E-06				
	Level 3	17968	0.1	1	179680		179680		5.57E-06				
	Level 4	35196	0.2	1	175980		175980		5.68E-06				
	Level 5	72406	0.4	1	181015		181015		5.52E-06				
	Level 6	176986	1	1	176986		176986		5.65E-06				
Average CF					178025.2		178025.2						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2075	0.02	1	103750	1.51	103750	1.5076	9.64E-06	9.63E-06	nr	0.9998	nr
	Level 2	5175	0.05	1	103500		103500		9.66E-06				
	Level 3	10438	0.1	1	104380		104380		9.58E-06				
	Level 4	20608	0.2	1	103040		103040		9.70E-06				
	Level 5	42680	0.4	1	106700		106700		9.37E-06				
	Level 6	102089	1	1	102089		102089		9.80E-06				
Average CF					103909.8		103909.8						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4150	0.02	1	207500	1.15	207500	1.15	4.82E-06	4.76E-06	nr	0.9999	nr
	Level 2	10556	0.05	1	211120		211120		4.74E-06				
	Level 3	21179	0.1	1	211790		211790		4.72E-06				
	Level 4	41650	0.2	1	208250		208250		4.80E-06				
	Level 5	85518	0.4	1	213795		213795		4.68E-06				
	Level 6	208842	1	1	208842		208842		4.79E-06				
Average CF					210216.2		210216.2						

nr - not reported
 TNB - trinitrobenzene
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 TNT - trinitrotoluene
 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	3941	0.04	1	98525	1.92	98525	1.915	1.01E-05	9.84E-06	nr	0.9999	nr
	Level 2	10319	0.1	1	103190		103190		9.69E-06				
	Level 3	20568	0.2	1	102840		102840		9.72E-06				
	Level 4	40457	0.4	1	101142.5		101143		9.89E-06				
	Level 5	83004	0.8	1	103755		103755		9.64E-06				
	Level 6	201561	2	1	100780.5		100781		9.92E-06				
Average CF					101705.5		101705.7						
NB	Level 1	2726	0.02	1	136300	1.08	136309	1.076	7.34E-06	7.26E-06	nr	1.0000	nr
	Level 2	6955	0.05	1	139100		139100		7.19E-06				
	Level 3	13852	0.1	1	138520		138520		7.22E-06				
	Level 4	27114	0.2	1	135570		135570		7.38E-06				
	Level 5	55624	0.4	1	139060		139060		7.19E-06				
	Level 6	137786	1	1	137786		137786		7.26E-06				
Average CF					137722.7		137724.2						
2,4,6-TNT	Level 1	2235	0.02	1	111750	2.40	111750	2.399	8.95E-06	8.64E-06	nr	1.0000	nr
	Level 2	5976	0.05	1	119520		119520		8.37E-06				
	Level 3	11800	0.1	1	118000		118000		8.47E-06				
	Level 4	22804	0.2	1	114020		114020		8.77E-06				
	Level 5	46393	0.4	1	115982.5		115983		8.62E-06				
	Level 6	115253	1	1	115253		115253		8.68E-06				
Average CF					115754.3		115754.3						
2-AM-4,6-DNT	Level 1	3862	0.04	1	96550	1.15	96550	1.149	1.04E-05	1.02E-05	nr	1.0000	nr
	Level 2	9852	0.1	1	98520		98520		1.02E-05				
	Level 3	19743	0.2	1	98715		98715		1.01E-05				
	Level 4	39063	0.4	1	97657.5		97658		1.02E-05				
	Level 5	79947	0.8	1	99933.75		99934		1.00E-05				
	Level 6	196919	2	1	98459.5		98460		1.02E-05				
Average CF					98306.0		98306.2						
4-AM-2,6-DNT	Level 1	2779	0.04	1	69475	1.24	69475	1.241	1.44E-05	1.42E-05	nr	1.0000	nr
	Level 2	7123	0.1	1	71230		71230		1.40E-05				
	Level 3	14230	0.2	1	71150		71150		1.41E-05				
	Level 4	27867	0.4	1	69667.5		69668		1.44E-05				
	Level 5	57121	0.8	1	71401.25		71401		1.40E-05				
	Level 6	139879	2	1	69939.5		69940		1.43E-05				
Average CF					70477.2		70477.3						

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	2629	0.02	1	131450	1.10	131450	1.1	7.61E-06	7.48E-06	nr	1.0000	nr
	Level 2	6785	0.05	1	135700		135700		7.37E-06				
	Level 3	13475	0.1	1	134750		134750		7.42E-06				
	Level 4	26614	0.2	1	133070		133070		7.51E-06				
	Level 5	53415	0.4	1	133537.5		133538		7.49E-06				
	Level 6	134242	1	1	134242		134242		7.45E-06				
Average CF					133791.6		133791.7						
2,6-DNT	Level 1	2903	0.04	1	72575	1.04	72575	1.037	1.38E-05	1.39E-05	nr	1.0000	nr
	Level 2	7188	0.1	1	71880		71880		1.39E-05				
	Level 3	14403	0.2	1	72015		72015		1.39E-05				
	Level 4	28442	0.4	1	71105		71105		1.41E-05				
	Level 5	56435	0.8	1	70543.75		70544		1.42E-05				
	Level 6	144237	2	1	72118.5		72119		1.39E-05				
Average CF					71706.2		71706.3						
2-NT	Level 1	2324	0.04	1	58100	2.21	58100	2.207	1.72E-05	1.79E-05	nr	1.0000	nr
	Level 2	5611	0.1	1	56110		56110		1.78E-05				
	Level 3	11332	0.2	1	56660		56660		1.76E-05				
	Level 4	21994	0.4	1	54985		54985		1.82E-05				
	Level 5	44543	0.8	1	55678.75		55679		1.80E-05				
	Level 6	109416	2	1	54708		54708		1.83E-05				
Average CF					56040.3		56040.3						
3-NT	Level 1	2013	0.04	1	50325	2.82	50325	2.815	1.99E-05	1.88E-05	nr	1.0000	nr
	Level 2	5311	0.1	1	53110		53110		1.88E-05				
	Level 3	10870	0.2	1	54350		54350		1.84E-05				
	Level 4	21318	0.4	1	53295		53295		1.88E-05				
	Level 5	43447	0.8	1	54308.75		54309		1.84E-05				
	Level 6	107645	2	1	53822.5		53823		1.86E-05				
Average CF					53201.9		53202.0						
4-NT	Level 1	1902	0.04	1	47550	2.46	47550	2.455	2.10E-05	2.19E-05	nr	1.0000	nr
	Level 2	4559	0.1	1	45590		45590		2.19E-05				
	Level 3	9272	0.2	1	46360		46360		2.16E-05				
	Level 4	17753	0.4	1	44382.5		44383		2.25E-05				
	Level 5	35971	0.8	1	44963.75		44964		2.22E-05				
	Level 6	90630	2	1	45315		45315		2.21E-05				
Average CF					45693.5		45693.7						

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 3/1/2007

SDG: 250293, 250401
Instrument: 43

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2722	0.02	1	136100	4.90	136100	4.9	7.35E-06	8.10E-06	nr	1.0000	nr
	Level 2	6084	0.05	1	121680		121680		8.22E-06				
	Level 3	12083	0.1	1	120830		120830		8.28E-06				
	Level 4	24163	0.2	1	120815		120815		8.28E-06				
	Level 5	48641	0.4	1	121602.5		121603		8.22E-06				
	Level 6	121460	1	1	121460		121460		8.23E-06				
Average CF					123747.9		123748.0						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1973	0.02	1	98650	1.48	98650	1.481	1.01E-05	1.19E-05	nr	0.9999	nr
	Level 2	4854	0.05	1	97080		97080		1.03E-05				
	Level 3	9883	0.1	1	98830		98830		2.06E-05				
	Level 4	20000	0.2	1	100000		100000		1.00E-05				
	Level 5	38812	0.4	1	97030		97030		1.03E-05				
	Level 6	100587	1	1	100587		100587		9.94E-06				
Average CF					98696.2		98696.2						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	4175	0.02	1	208750	3.96	280750	3.995	4.79E-06	5.16E-06	nr	1.0000	nr
	Level 2	9705	0.05	1	194100		194100		5.15E-06				
	Level 3	18919	0.1	1	189190		189190		5.29E-06				
	Level 4	37577	0.2	1	187885		187885		5.32E-06				
	Level 5	77232	0.4	1	193080		193080		5.18E-06				
	Level 6	190110	1	1	190110		190110		5.26E-06				
Average CF					193852.5		205852.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2379	0.02	1	118950	4.38	118950	4.38	8.41E-06	9.17E-06	nr	1.0000	nr
	Level 2	5388	0.05	1	107760		107760		9.28E-06				
	Level 3	10788	0.1	1	107880		107880		9.27E-06				
	Level 4	21249	0.2	1	106245		106245		9.41E-06				
	Level 5	43057	0.4	1	107642.5		107643		9.29E-06				
	Level 6	107082	1	1	107082		107082		9.34E-06				
Average CF					109259.9		109260.0						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4831	0.02	1	241550	4.01	241550	4.013	4.14E-06	4.48E-06	nr	1.0000	nr
	Level 2	11165	0.05	1	223300		223300		4.48E-06				
	Level 3	21937	0.1	1	219370		219370		4.56E-06				
	Level 4	43449	0.2	1	217245		217245		4.60E-06				
	Level 5	88706	0.4	1	221765		221765		4.51E-06				
	Level 6	219205	1	1	219205		219205		4.56E-06				
Average CF					223739.2		223739.2						

nr - not reported
 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	4890	0.04	1	122250	6.06	122250	6.062	8.18E-06	9.14E-06	nr	0.9999	nr
	Level 2	11131	0.1	1	111310		111310		8.98E-06				
	Level 3	21093	0.2	1	105465		105465		9.48E-06				
	Level 4	41819	0.4	1	104547.5		104548		9.57E-06				
	Level 5	87414	0.8	1	109267.5		109268		9.15E-06				
	Level 6	211270	2	1	105635		105635		9.47E-06				
Average CF					109745.8		109746.0						
NB	Level 1	3007	0.02	1	150350	4.94	150350	4.939	6.65E-06	7.28E-06	nr	1.0000	nr
	Level 2	6999	0.05	1	139980		139980		7.14E-06				
	Level 3	13381	0.1	1	133810		133810		7.47E-06				
	Level 4	26457	0.2	1	132285		132285		7.56E-06				
	Level 5	54235	0.4	1	135587.5		135588		7.38E-06				
	Level 6	133590	1	1	133590		133590		7.49E-06				
Average CF					137600.4		137600.5						
2,4,6-TNT	Level 1	2756	0.02	1	137800	6.79	137800	6.786	7.26E-06	8.18E-06	nr	0.9998	nr
	Level 2	6301	0.05	1	126020		126020		7.94E-06				
	Level 3	11764	0.1	1	117640		117640		8.50E-06				
	Level 4	23157	0.2	1	115785		115785		8.64E-06				
	Level 5	48675	0.4	1	121687.5		121688		8.22E-06				
	Level 6	116965	1	1	116965		116965		8.55E-06				
Average CF					122649.6		122649.7						
2-AM-4,6-DNT	Level 1	4536	0.04	1	113400	4.72	113400	4.719	8.82E-06	9.64E-06	nr	1.0000	nr
	Level 2	10452	0.1	1	104520		104520		9.57E-06				
	Level 3	20286	0.2	1	101430		101430		9.86E-06				
	Level 4	40074	0.4	1	100185		100185		9.98E-06				
	Level 5	82237	0.8	1	102796.25		102796		9.73E-06				
	Level 6	202002	2	1	101001		101001		9.90E-06				
Average CF					103888.7		103888.7						
4-AM-2,6-DNT	Level 1	3398	0.04	1	84950	5.14	84950	5.140	1.18E-05	1.30E-05	nr	1.0000	nr
	Level 2	7838	0.1	1	78380		78380		1.28E-05				
	Level 3	14976	0.2	1	74880		74880		1.34E-05				
	Level 4	29864	0.4	1	74660		74660		1.34E-05				
	Level 5	61074	0.8	1	76342.5		76343		1.31E-05				
	Level 6	149847	2	1	74923.5		74924		1.33E-05				
Average CF					77356.0		77356.2						

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 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	3114	0.02	1	155700	6.58	155700	6.585	6.42E-06	7.24E-06	nr	0.9999	nr
	Level 2	7040	0.05	1	140800		140800		7.10E-06				
	Level 3	13259	0.1	1	132590		132590		7.54E-06				
	Level 4	26227	0.2	1	131135		131135		7.63E-06				
	Level 5	55218	0.4	1	138045		138045		7.24E-06				
	Level 6	133394	1	1	133394		133394		7.50E-06				
Average CF					138610.7		138610.7						
2,6-DNT	Level 1	3390	0.04	1	84750	6.03	84750	6.029	1.18E-05	1.31E-05	nr	0.9999	nr
	Level 2	7769	0.1	1	77690		77690		1.29E-05				
	Level 3	14684	0.2	1	73240		73240		1.36E-05				
	Level 4	28902	0.4	1	72255		72255		1.38E-05				
	Level 5	60901	0.8	1	76126.25		76126.25		1.31E-05				
	Level 6	147030	2	1	73515		73515		1.36E-05				
Average CF					76292.7		76292.7						
2-NT	Level 1	2491	0.04	1	62275	6.12	62275	6.116	1.61E-05	1.79E-05	nr	0.9999	nr
	Level 2	5685	0.1	1	56850		56850		1.76E-05				
	Level 3	10759	0.2	1	53795		53795		1.86E-05				
	Level 4	21230	0.4	1	53075		53075		1.88E-05				
	Level 5	44553	0.8	1	55691.25		55691.25		1.80E-05				
	Level 6	107571	2	1	53785.5		53786		1.86E-05				
Average CF					55912.0		55912.0						
3-NT	Level 1	2383	0.04	1	59575	6.68	59575	6.677	1.68E-05	1.89E-05	nr	0.9999	nr
	Level 2	5398	0.1	1	53980		53980		1.85E-05				
	Level 3	10105	0.2	1	50525		50525		1.98E-05				
	Level 4	20051	0.4	1	50127.5		50128		1.99E-05				
	Level 5	42306	0.8	1	52882.5		52883		1.89E-05				
	Level 6	101971	2	1	50985.5		50986		1.96E-05				
Average CF					53012.6		53012.8						
4-NT	Level 1	1972	0.04	1	49300	6.96	49300	9.957	2.03E-05	2.30E-05	nr	0.9999	nr
	Level 2	4461	0.1	1	44610		44610		2.24E-05				
	Level 3	8286	0.2	1	41430		41430		2.41E-05				
	Level 4	16520	0.4	1	41300		41300		2.42E-05				
	Level 5	34746	0.8	1	43432.5		43433		2.30E-05				
	Level 6	83943	2	1	41971.5		41972		2.38E-05				
Average CF					43674.0		43674.2						

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 3/20/2007

SDG: 250418
Instrument: 35

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2196	0.02	1	109800	1.72	109800	1.718	9.11E-06	9.38E-06	nr	1.0000	nr
	Level 2	5226	0.05	1	104520		104520		9.57E-06				
	Level 3	10631	0.1	1	106310		106310		9.41E-06				
	Level 4	21158	0.2	1	105790		105790		9.45E-06				
	Level 5	43070	0.4	1	107675		107675		9.29E-06				
	Level 6	105985	1	1	105985		105985		9.44E-06				
Average CF					106680.0		106680.0						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1680	0.02	1	84000	2.08	84000	2.080	1.19E-05	1.14E-05	nr	1.0000	nr
	Level 2	4348	0.05	1	86960		86960		1.15E-05				
	Level 3	8856	0.1	1	88560		88560		1.13E-05				
	Level 4	17498	0.2	1	87490		87490		1.14E-05				
	Level 5	35511	0.4	1	88777.5		88777.5		1.13E-05				
	Level 6	88650	1	1	88650		88650		1.13E-05				
Average CF					87406.3		87406.3						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3452	0.02	1	172600	1.86	172600	1.862	5.79E-06	5.93E-06	nr	0.9999	nr
	Level 2	8246	0.05	1	164920		164920		6.06E-06				
	Level 3	16831	0.1	1	168310		168310		5.94E-06				
	Level 4	33169	0.2	1	165845		165845		6.03E-06				
	Level 5	68835	0.4	1	172087.5		172087.5		5.81E-06				
	Level 6	168412	1	1	168412		168412		5.94E-06				
Average CF					168695.8		168695.8						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2010	0.02	1	100500	1.67	100500	1.666	9.95E-06	1.01E-05	nr	1.0000	nr
	Level 2	4828	0.05	1	96560		96560		1.04E-05				
	Level 3	9942	0.1	1	99420		99420		1.01E-05				
	Level 4	19450	0.2	1	97250		97250		1.03E-05				
	Level 5	40179	0.4	1	100447.5		100447.5		9.96E-06				
	Level 6	98416	1	1	98416		98416		1.02E-05				
Average CF					98765.6		98765.6						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4079	0.02	1	203950	1.55	203950	1.546	4.90E-06	5.00E-06	nr	1.0000	nr
	Level 2	9838	0.05	1	196760		196760		5.08E-06				
	Level 3	19954	0.1	1	199540		199540		5.01E-06				
	Level 4	39342	0.2	1	196710		196710		5.08E-06				
	Level 5	81311	0.4	1	203277.5		203277.5		4.92E-06				
	Level 6	200133	1	1	200133		200133		5.00E-06				
Average CF					200061.8		200060.2						

nr - not reported
 TNB - trinitrobenzene
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 NB - nitrobenzene
 TNT - trinitrotoluene
 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	3917	0.04	1	97925	2.76	97925	2.762	1.02E-05	1.07E-05	nr	0.9999	nr
	Level 2	9141	0.1	1	91410		91410		1.09E-05				
	Level 3	18511	0.2	1	92555		92555		1.08E-05				
	Level 4	36437	0.4	1	91092.5		91093		1.10E-05				
	Level 5	75934	0.8	1	94917.5		94918		1.05E-05				
	Level 6	185342	2	1	92671		92671		1.08E-05				
Average CF					93428.5		93428.7						
NB	Level 1	2880	0.02	1	144000	5.38	144000	5.382	6.94E-06	7.70E-06	nr	0.9999	nr
	Level 2	6277	0.05	1	125540		125540		7.97E-06				
	Level 3	12796	0.1	1	127960		127960		7.81E-06				
	Level 4	25090	0.2	1	125450		125450		7.97E-06				
	Level 5	52127	0.4	1	130317.5		130318		7.67E-06				
	Level 6	127803	1	1	127803		127803		7.82E-06				
Average CF					130178.4		130178.5						
2,4,6-TNT	Level 1	2240	0.02	1	112000	2.71	112000	2.7088	8.93E-06	9.36E-06	nr	0.9999	nr
	Level 2	5286	0.05	1	105720		105720		9.46E-06				
	Level 3	10600	0.1	1	106000		106000		9.43E-06				
	Level 4	20736	0.2	1	103680		103680		9.65E-06				
	Level 5	43257	0.4	1	108142.5		108143		9.25E-06				
	Level 6	105566	1	1	105566		105566		9.47E-06				
Average CF					106851.4		106851.5						
2-AM-4,6-DNT	Level 1	3727	0.04	1	93175	1.73	93175	1.732	1.07E-05	1.10E-05	nr	0.9999	nr
	Level 2	9019	0.1	1	90190		90190		1.11E-05				
	Level 3	18204	0.2	1	91020		91020		1.10E-05				
	Level 4	35552	0.4	1	88880		88880		1.13E-05				
	Level 5	74013	0.8	1	92516.25		92516		1.08E-05				
	Level 6	180958	2	1	90479		90479		1.11E-05				
Average CF					91043.4		91043.3						
4-AM-2,6-DNT	Level 1	2733	0.04	1	68325	2.33	68325	2.329	1.46E-05	1.52E-05	nr	0.9999	nr
	Level 2	6508	0.1	1	65080		65080		1.54E-05				
	Level 3	13072	0.2	1	65360		65360		1.53E-05				
	Level 4	25548	0.4	1	63870		63870		1.57E-05				
	Level 5	53154	0.8	1	66442.5		66443		1.51E-05				
	Level 6	130104	2	1	65052		65052		1.54E-05				
Average CF					65688.3		65688.3						

nr - not reported
 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	2499	0.02	1	124950	1.87	124950	1.8748	8.00E-06	8.19E-06	nr	0.9999	nr
	Level 2	6063	0.05	1	121260		121260		8.25E-06				
	Level 3	12196	0.1	1	121960		121960		8.20E-06				
	Level 4	23773	0.2	1	118865		118865		8.41E-06				
	Level 5	49820	0.4	1	124550		124550		8.03E-06				
	Level 6	121152	1	1	121152		121152		8.25E-06				
Average CF					122122.8		122122.8						
2,6-DNT	Level 1	2663	0.04	1	66575	1.58	66575	1.581	1.50E-05	1.52E-05	nr	0.9999	nr
	Level 2	6560	0.1	1	65600		65600		1.52E-05				
	Level 3	13139	0.2	1	65695		65695		1.52E-05				
	Level 4	25737	0.4	1	64342.5		64343		1.55E-05				
	Level 5	53880	0.8	1	67350		67350		1.48E-05				
	Level 6	130632	2	1	65316		65316		1.53E-05				
Average CF					65813.1		65813.2						
2-NT	Level 1	2103	0.04	1	52575	2.18	52575	2.182	1.90E-05	1.98E-05	nr	0.9999	nr
	Level 2	5024	0.1	1	50240		50240		1.99E-05				
	Level 3	9996	0.2	1	49980		49980		2.00E-05				
	Level 4	19844	0.4	1	49610		49610		2.02E-05				
	Level 5	40833	0.8	1	51041.25		51041		1.96E-05				
	Level 6	99771	2	1	49885.5		49886		2.00E-05				
Average CF					50555.3		50555.3						
3-NT	Level 1	2052	0.04	1	51300	3.36	51300	3.357	1.95E-05	2.07E-05	nr	0.9999	nr
	Level 2	4691	0.1	1	46910		46910		2.13E-05				
	Level 3	9597	0.2	1	47985		47983		2.08E-05				
	Level 4	18863	0.4	1	47157.5		47158		2.12E-05				
	Level 5	39142	0.8	1	48927.5		48928		2.04E-05				
	Level 6	95281	2	1	47640.5		47641		2.10E-05				
Average CF					48320.1		48320.0						
4-NT	Level 1	1678	0.04	1	41950	2.11	41950	2.109	2.38E-05	2.47E-05	nr	0.9999	nr
	Level 2	4018	0.1	1	40180		40180		2.49E-05				
	Level 3	8025	0.2	1	40125		40125		2.49E-05				
	Level 4	15859	0.4	1	39647.5		39648		2.52E-05				
	Level 5	33009	0.8	1	41261.25		41261		2.42E-05				
	Level 6	80578	2	1	40289		40269		2.48E-05				
Average CF					40575.5		40572.2						

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 5/11/2007

SDG: 500-4602, 500-4661
Instrument: 43

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2531	0.02	1	126550	2.91	126550	2.907	7.90E-06	8.27E-06	nr	0.9999	nr
	Level 2	5835	0.05	1	116700		116700		8.57E-06				
	Level 3	12030	0.1	1	120300		120300		8.31E-06				
	Level 4	24442	0.2	1	122210		122210		8.18E-06				
	Level 5	47169	0.4	1	117922.5		117923		8.48E-06				
	Level 6	122052	1	1	122052		122052		8.19E-06				
Average CF					120955.8		120955.8						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1967	0.02	1	98350	1.76	98350	1.759	1.02E-05	1.22E-05	nr	1.0000	nr
	Level 2	4752	0.05	1	95040		95040		1.05E-05				
	Level 3	9464	0.1	1	94640		94640		2.10E-05				
	Level 4	18836	0.2	1	94180		94180		1.06E-05				
	Level 5	38978	0.4	1	97445		97445		1.03E-05				
	Level 6	96780	1	1	96780		96780		1.03E-05				
Average CF					96072.5		96072.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3968	0.02	1	198400	2.40	198400	2.401	5.04E-06	5.24E-06	nr	0.9999	nr
	Level 2	9397	0.05	1	187940		187940		5.32E-06				
	Level 3	19135	0.1	1	191350		191350		5.23E-06				
	Level 4	38004	0.2	1	190020		190020		5.26E-06				
	Level 5	73941	0.4	1	184852.5		184853		5.41E-06				
	Level 6	192461	1	1	192461		192461		5.20E-06				
Average CF					190837.3		190837.3						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2315	0.02	1	115750	2.83	115750	2.825	8.64E-06	9.12E-06	nr	1.0000	nr
	Level 2	5411	0.05	1	108220		108220		9.24E-06				
	Level 3	10884	0.1	1	108840		108840		9.19E-06				
	Level 4	21935	0.2	1	109675		109675		9.12E-06				
	Level 5	42805	0.4	1	107012.5		107013		9.34E-06				
	Level 6	108577	1	1	108577		108577		9.21E-06				
Average CF					109679.1		109679.2						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4708	0.02	1	235400	3.35	235400	3.349	4.25E-06	4.52E-06	nr	0.9999	nr
	Level 2	10841	0.05	1	216820		216820		4.61E-06				
	Level 3	22131	0.1	1	221310		221310		4.52E-06				
	Level 4	44257	0.2	1	221285		221285		4.52E-06				
	Level 5	85506	0.4	1	213765		213765		4.68E-06				
	Level 6	220865	1	1	220865		220865		4.53E-06				
Average CF					221574.2		221574.2						

nr - not reported
 TNB - trinitrobenzene
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 DNT - dinitrotoluene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	4462	0.04	1	111550	4.67	111550	4.667	8.96E-06	9.62E-06	nr	0.9995	nr
	Level 2	9951	0.1	1	99510		99510		1.00E-05				
	Level 3	21125	0.2	1	105625		105625		9.47E-06				
	Level 4	41188	0.4	1	102970		102970		9.71E-06				
	Level 5	78765	0.8	1	98456.25		98456		1.02E-05				
	Level 6	213111	2	1	106555.5		106556		9.38E-06				
Average CF					104111.1		104111.2						
NB	Level 1	2846	0.02	1	142300	3.07	142300	3.068	7.03E-06	7.39E-06	nr	0.9998	nr
	Level 2	6631	0.05	1	132620		132620		7.54E-06				
	Level 3	13640	0.1	1	136400		136400		7.33E-06				
	Level 4	27219	0.2	1	136095		136095		7.35E-06				
	Level 5	51984	0.4	1	129960		129960		7.69E-06				
	Level 6	135705	1	1	135705		135705		7.37E-06				
Average CF					135513.3		135513.3						
2,4,6-TNT	Level 1	2489	0.02	1	124450	3.44	124450	3.443	8.04E-06	8.35E-06	nr	0.9995	nr
	Level 2	5885	0.05	1	117700		117700		8.50E-06				
	Level 3	12209	0.1	1	122090		122090		8.19E-06				
	Level 4	24028	0.2	1	120140		120140		8.32E-06				
	Level 5	45148	0.4	1	112870		112870		8.86E-06				
	Level 6	122221	1	1	122221		122221		8.18E-06				
Average CF					119911.8		119911.8						
2-AM-4,6-DNT	Level 1	4246	0.04	1	106150	3.06	106150	3.064	9.42E-06	9.87E-06	nr	0.9997	nr
	Level 2	9959	0.1	1	99590		99590		1.00E-05				
	Level 3	20240	0.2	1	101200		101200		9.88E-06				
	Level 4	40802	0.4	1	102005		102005		9.80E-06				
	Level 5	77471	0.8	1	96838.75		96839		1.03E-05				
	Level 6	204997	2	1	102498.5		102499		9.76E-06				
Average CF					101380.4		101380.5						
4-AM-2,6-DNT	Level 1	3237	0.04	1	80925	3.99	80925	3.993	1.24E-05	1.32E-05	nr	0.9997	nr
	Level 2	7466	0.1	1	74660		74660		1.34E-05				
	Level 3	15009	0.2	1	75045		75045		1.33E-05				
	Level 4	30683	0.4	1	76707.5		76708		1.30E-05				
	Level 5	57364	0.8	1	71705		71705		1.39E-05				
	Level 6	151202	2	1	75601		75601		1.32E-05				
Average CF					75773.9		75774.0						

nr - not reported
 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	2842	0.02	1	142100	3.43	142100	3.428	7.04E-06	7.34E-06	nr	0.9995	nr
	Level 2	6626	0.05	1	132520		132520		7.55E-06				
	Level 3	13723	0.1	1	137230		137230		7.29E-06				
	Level 4	27654	0.2	1	138270		138270		7.23E-06				
	Level 5	51733	0.4	1	129332.5		129333		7.73E-06				
	Level 6	139171	1	1	139171		139171		7.19E-06				
Average CF					136437.3		136437.3						
2,6-DNT	Level 1	3099	0.04	1	77475	3.35	77425	3.348	1.29E-05	1.34E-05	nr	0.9995	nr
	Level 2	7262	0.1	1	72620		72620		1.38E-05				
	Level 3	15018	0.2	1	75090		75090		1.33E-05				
	Level 4	30378	0.4	1	75945		75945		1.32E-05				
	Level 5	56642	0.8	1	70802.5		70803		1.41E-05				
	Level 6	152462	2	1	76231		76231		1.31E-05				
Average CF					74693.9		74685.7						
2-NT	Level 1	2343	0.04	1	58575	4.27	58575	4.267	1.71E-05	1.84E-05	nr	0.9997	nr
	Level 2	5307	0.1	1	53070		53070		1.88E-05				
	Level 3	10896	0.2	1	54480		54480		1.84E-05				
	Level 4	21817	0.4	1	54542.5		54543		1.83E-05				
	Level 5	41310	0.8	1	51637.5		51638		1.94E-05				
	Level 6	110020	2	1	55010		55010		1.82E-05				
Average CF					54552.5		54552.7						
3-NT	Level 1	2169	0.04	1	54225	4.00	54225	3.997	1.84E-05	1.96E-05	nr	0.9996	nr
	Level 2	4938	0.1	1	49380		49380		2.03E-05				
	Level 3	10302	0.2	1	51510		51510		1.94E-05				
	Level 4	20714	0.4	1	51785		51785		1.93E-05				
	Level 5	38757	0.8	1	48446.25		48446		2.06E-05				
	Level 6	103763	2	1	51881.5		51882		1.93E-05				
Average CF					51204.6		51204.7						
4-NT	Level 1	1799	0.04	1	44975	3.29	44975	3.292	2.22E-05	2.34E-05	nr	0.9997	nr
	Level 2	4212	0.1	1	42120		42120		2.37E-05				
	Level 3	8530	0.2	1	42650		42650		2.34E-05				
	Level 4	17262	0.4	1	43155		43155		2.32E-05				
	Level 5	32569	0.8	1	40711.25		40711		2.46E-05				
	Level 6	86555	2	1	43277.5		43278		2.31E-05				
Average CF					42814.8		42814.8						

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 5/25/2007

SDG: 500-4599, 500-4662, 500-5427, 500-5718, 500-5719, 500-5720
Instrument: 35

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2111	0.02	1	105550	1.96	105550	1.958	9.47E-06	9.77E-06	nr	1.0000	nr
	Level 2	5028	0.05	1	100560		100560		9.94E-06				
	Level 3	10017	0.1	1	100170		100170		9.98E-06				
	Level 4	20535	0.2	1	102675		102675		9.74E-06				
	Level 5	41399	0.4	1	103497.5		103498		9.66E-06				
	Level 6	101669	1	1	101669		101669		9.84E-06				
Average CF					102353.6		102353.7						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1372	0.02	1	68600	6.74	68600	6.743	1.46E-05	1.30E-05	nr	0.9999	nr
	Level 2	3722	0.05	1	74440		74440		1.34E-05				
	Level 3	7747	0.1	1	77470		77470		1.29E-05				
	Level 4	16186	0.2	1	80930		80930		1.24E-05				
	Level 5	33005	0.4	1	82512.5		82513		1.21E-05				
	Level 6	80809	1	1	80809		80809		1.24E-05				
Average CF					77460.3		77460.3						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3525	0.02	1	176250	2.53	176250	2.530	5.67E-06	5.91E-06	nr	1.0000	nr
	Level 2	8555	0.05	1	171100		171100		5.84E-06				
	Level 3	16346	0.1	1	163460		163460		6.12E-06				
	Level 4	33735	0.2	1	168675		168675		5.93E-06				
	Level 5	67621	0.4	1	169052.5		169053		5.92E-06				
	Level 6	166937	1	1	166937		166937		5.99E-06				
Average CF					169245.8		169245.8						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2147	0.02	1	107350	4.49	107350	4.495	9.32E-06	1.01E-05	nr	1.0000	nr
	Level 2	4982	0.05	1	99640		99640		1.00E-05				
	Level 3	9585	0.1	1	95850		95850		1.04E-05				
	Level 4	19452	0.2	1	97260		97260		1.03E-05				
	Level 5	38830	0.4	1	97075		97075		1.03E-05				
	Level 6	95528	1	1	95528		95528		1.05E-05				
Average CF					98783.8		98783.8						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4108	0.02	1	205400	2.25	203950	1.546	4.87E-06	5.06E-06	nr	1.0000	nr
	Level 2	9961	0.05	1	199220		196750		5.02E-06				
	Level 3	19237	0.1	1	192370		199540		5.20E-06				
	Level 4	39457	0.2	1	197285		196710		5.07E-06				
	Level 5	79286	0.4	1	198215		203278		5.05E-06				
	Level 6	194769	1	1	194769		200133		5.13E-06				
Average CF					197876.5		200060.2						

nr - not reported
 TNB - trinitrobenzene
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 NB - nitrobenzene
 TNT - trinitrotoluene
 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	3931	0.04	1	98275	3.09	98275	3.091	1.02E-05	1.06E-05	nr	1.0000	nr
	Level 2	9749	0.1	1	97490		97490		1.03E-05				
	Level 3	18036	0.2	1	90180		90180		1.11E-05				
	Level 4	38166	0.4	1	95415		95415		1.05E-05				
	Level 5	75453	0.8	1	94316.25		94316		1.06E-05				
	Level 6	186969	2	1	93484.5		94860		1.07E-05				
Average CF					94860.1		95089.3						
NB	Level 1	2588	0.02	1	129400	2.42	129400	2.416	7.73E-06	7.92E-06	nr	1.0000	nr
	Level 2	6468	0.05	1	129360		129360		7.73E-06				
	Level 3	12138	0.1	1	121380		121380		8.24E-06				
	Level 4	25366	0.2	1	126830		126830		7.88E-06				
	Level 5	50555	0.4	1	126387.5		126388		7.91E-06				
	Level 6	124540	1	1	124540		124540		8.03E-06				
Average CF					126316.3		126316.3						
2,4,6-TNT	Level 1	2373	0.02	1	118650	4.41	118650	4.413	8.43E-06	8.98E-06	nr	1.0000	nr
	Level 2	5781	0.05	1	115620		115620		8.65E-06				
	Level 3	10486	0.1	1	104860		104860		9.54E-06				
	Level 4	22197	0.2	1	110985		110985		9.01E-06				
	Level 5	43986	0.4	1	109965		109965		9.09E-06				
	Level 6	108999	1	1	108999		108999		9.17E-06				
Average CF					111513.2		111513.2						
2-AM-4,6-DNT	Level 1	3760	0.04	1	94000	2.22	94000	2.222	1.06E-05	1.10E-05	nr	1.0000	nr
	Level 2	9171	0.1	1	91710		91710		1.09E-05				
	Level 3	17611	0.2	1	88055		88055		1.14E-05				
	Level 4	36133	0.4	1	90332.5		90333		1.11E-05				
	Level 5	72726	0.8	1	90907.5		90908		1.10E-05				
	Level 6	179141	2	1	89570.5		89571		1.12E-05				
Average CF					90762.6		90762.8						
4-AM-2,6-DNT	Level 1	2684	0.04	1	67100	2.35	67100	2.352	1.49E-05	1.55E-05	nr	1.0000	nr
	Level 2	6561	0.1	1	65610		65610		1.52E-05				
	Level 3	12540	0.2	1	62700		62700		1.59E-05				
	Level 4	25833	0.4	1	64582.5		64583		1.55E-05				
	Level 5	51839	0.8	1	64798.75		64799		1.54E-05				
	Level 6	127402	2	1	63701		63701		1.57E-05				
Average CF					64748.7		64749.0						

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	2762	0.02	1	138100	2.60	138100	2.601	7.24E-06	7.38E-06	nr	1.0000	nr
	Level 2	7006	0.05	1	140120		140120		7.14E-06				
	Level 3	12987	0.1	1	129870		129870		7.70E-06				
	Level 4	27143	0.2	1	135715		135715		7.37E-06				
	Level 5	54051	0.4	1	135127.5		135128		7.40E-06				
	Level 6	134038	1	1	134038		134038		7.46E-06				
Average CF					135495.1		135495.2						
2,6-DNT	Level 1	2765	0.04	1	69125	2.94	69125	2.943	1.45E-05	1.51E-05	nr	1.0000	nr
	Level 2	6807	0.1	1	68070		68070		1.47E-05				
	Level 3	12744	0.2	1	63720		63720		1.57E-05				
	Level 4	26430	0.4	1	66075		66075		1.51E-05				
	Level 5	52787	0.8	1	65983.75		65984		1.52E-05				
	Level 6	130430	2	1	65215		65215		1.53E-05				
Average CF					66364.8		66364.8						
2-NT	Level 1	2160	0.04	1	54000	3.26	54000	3.264	1.85E-05	1.94E-05	nr	1.0000	nr
	Level 2	5277	0.1	1	52770		52770		1.90E-05				
	Level 3	9830	0.2	1	49150		49150		2.03E-05				
	Level 4	20644	0.4	1	51610		51610		1.94E-05				
	Level 5	40985	0.8	1	51231.25		51231		1.95E-05				
	Level 6	101295	2	1	50647.5		50648		1.97E-05				
Average CF					51568.1		51568.2						
3-NT	Level 1	1884	0.04	1	47100	2.56	47100	2.56	2.12E-05	2.13E-05	nr	1.0000	nr
	Level 2	4637	0.1	1	46370		46370		2.16E-05				
	Level 3	9139	0.2	1	45695		45695		2.19E-05				
	Level 4	18463	0.4	1	46157.5		46158		2.17E-05				
	Level 5	38784	0.8	1	48480		48480		2.06E-05				
	Level 6	97006	2	1	48503		48503		2.06E-05				
Average CF					47050.9		47051.0						
4-NT	Level 1	1682	0.04	1	42050	2.92	42050	2.925	2.38E-05	2.43E-05	nr	1.0000	nr
	Level 2	4269	0.1	1	42690		42690		2.34E-05				
	Level 3	7838	0.2	1	39190		39190		2.55E-05				
	Level 4	16550	0.4	1	41375		41375		2.42E-05				
	Level 5	32827	0.8	1	41033.75		41034		2.44E-05				
	Level 6	81473	2	1	40736.5		40737		2.45E-05				
Average CF					41179.2		41179.3						

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 8/4/2007

SDG: 500-5681
Instrument: 43

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2574	0.02	1	128700	1.81	128700	1.811	7.77E-06	7.77E-06	nr	0.9999	nr
	Level 2	6354	0.05	1	127080		127080		7.87E-06				
	Level 3	12584	0.1	1	125840		125840		7.95E-06				
	Level 4	25913	0.2	1	129565		129565		7.72E-06				
	Level 5	53063	0.4	1	132657.5		132658		7.54E-06				
	Level 6	128843	1	1	128843		128843		7.76E-06				
Average CF					128780.9		128781.0						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1926	0.02	1	96300	6.82	96300	6.819	1.04E-05	1.07E-05	nr	0.9996	nr
	Level 2	5881	0.05	1	117620		117620		8.50E-06				
	Level 3	10883	0.1	1	108830		108830		1.70E-05				
	Level 4	21523	0.2	1	107615		107615		9.29E-06				
	Level 5	43286	0.4	1	108215		108215		9.24E-06				
	Level 6	101285	1	1	101285		101285		9.87E-06				
Average CF					106644.2		106644.2						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	4173	0.02	1	208650	1.97	208650	1.972	4.79E-06	4.89E-06	nr	0.9999	nr
	Level 2	10083	0.05	1	201660		201660		4.96E-06				
	Level 3	19897	0.1	1	198970		198970		5.03E-06				
	Level 4	40600	0.2	1	203000		203000		4.93E-06				
	Level 5	83711	0.4	1	209277.5		209278		4.78E-06				
	Level 6	205093	1	1	205093		205093		4.88E-06				
Average CF					204441.8		204441.8						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2632	0.02	1	131600	5.57	131600	5.572	7.60E-06	8.45E-06	nr	0.9999	nr
	Level 2	5873	0.05	1	117460		117460		8.51E-06				
	Level 3	11445	0.1	1	114450		114450		8.74E-06				
	Level 4	22953	0.2	1	114765		114765		8.71E-06				
	Level 5	47389	0.4	1	118472.5		118473		8.44E-06				
	Level 6	114606	1	1	114606		114606		8.73E-06				
Average CF					118558.9		118559.0						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4937	0.02	1	246850	2.64	246850	2.639	4.05E-06	4.23E-06	nr	0.9999	nr
	Level 2	11649	0.05	1	232980		232980		4.29E-06				
	Level 3	23033	0.1	1	230330		230330		4.34E-06				
	Level 4	46623	0.2	1	233115		233115		4.29E-06				
	Level 5	96583	0.4	1	241457.5		241458		4.14E-06				
	Level 6	235230	1	1	235230		235230		4.25E-06				
Average CF					236660.4		236660.5						

nr - not reported
 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported	Recalculated	Reported
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	5016	0.04	1	125400	2.39	125400	2.386	7.97E-06	8.28E-06	nr	1.0000	nr
	Level 2	12035	0.1	1	120350		120350		8.31E-06				
	Level 3	23362	0.2	1	116810		116810		8.56E-06				
	Level 4	47713	0.4	1	119282.5		119283		8.38E-06				
	Level 5	97729	0.8	1	122161.25		122161		8.19E-06				
	Level 6	242425	2	1	121212.5		121213		8.25E-06				
Average CF					120869.4		120869.5						
NB	Level 1	2977	0.02	1	148850	2.31	148850	2.309	6.72E-06	6.97E-06	nr	0.9999	nr
	Level 2	7187	0.05	1	143740		143740		6.96E-06				
	Level 3	13975	0.1	1	139750		139750		7.16E-06				
	Level 4	28185	0.2	1	140925		140925		7.10E-06				
	Level 5	58239	0.4	1	145597.5		145598		6.87E-06				
	Level 6	142426	1	1	142426		142426		7.02E-06				
Average CF					143548.1		143548.2						
2,4,6-TNT	Level 1	2750	0.02	1	137500	2.21	137500	2.211	7.27E-06	7.49E-06	nr	1.0000	nr
	Level 2	6655	0.05	1	133100		133100		7.51E-06				
	Level 3	12891	0.1	1	128910		128910		7.76E-06				
	Level 4	26387	0.2	1	131935		131935		7.58E-06				
	Level 5	54094	0.4	1	135235		135235		7.39E-06				
	Level 6	134442	1	1	134442		134442		7.44E-06				
Average CF					133520.3		133520.3						
2-AM-4,6-DNT	Level 1	4739	0.04	1	118475	2.79	118475	2.790	8.44E-06	8.85E-06	nr	0.9999	nr
	Level 2	11254	0.1	1	112540		112540		8.89E-06				
	Level 3	21907	0.2	1	109535		109535		9.13E-06				
	Level 4	44847	0.4	1	112117.5		112118		8.92E-06				
	Level 5	91929	0.8	1	114911.25		114911		8.70E-06				
	Level 6	222371	2	1	111185.5		111186		8.99E-06				
Average CF					113127.4		113127.5						
4-AM-2,6-DNT	Level 1	3454	0.04	1	86350	2.38	86350	2.383	1.16E-05	1.20E-05	nr	0.9999	nr
	Level 2	8296	0.1	1	82960		82960		1.21E-05				
	Level 3	16150	0.2	1	80750		80750		1.24E-05				
	Level 4	32962	0.4	1	82405		82405		1.21E-05				
	Level 5	67561	0.8	1	84451.25		84451		1.18E-05				
	Level 6	163982	2	1	81991		81991		1.22E-05				
Average CF					83151.2		83151.2						

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	3245	0.02	1	162250	3.60	162250	3.595	6.16E-06	6.57E-06	nr	1.0000	nr
	Level 2	7570	0.05	1	151400		151400		6.61E-06				
	Level 3	14631	0.1	1	146310		146310		6.83E-06				
	Level 4	29749	0.2	1	148745		148745		6.72E-06				
	Level 5	61480	0.4	1	153700		153700		6.51E-06				
	Level 6	152253	1	1	152253		152253		6.57E-06				
Average CF					152443.0		152443.0						
2,6-DNT	Level 1	3471	0.04	1	86775	3.03	86775	3.026	1.15E-05	1.21E-05	nr	1.0000	nr
	Level 2	8189	0.1	1	81890		81890		1.22E-05				
	Level 3	15911	0.2	1	79555		79555		1.26E-05				
	Level 4	32368	0.4	1	80920		80920		1.24E-05				
	Level 5	6948	0.8	1	83685		83685		1.19E-05				
	Level 6	165443	2	1	82721.5		82722		1.21E-05				
Average CF					82591.1		82591.2						
2-NT	Level 1	2499	0.04	1	62475	2.59	62475	2.59	1.60E-05	1.66E-05	nr	1.0000	nr
	Level 2	6000	0.1	1	60000		60000		1.67E-05				
	Level 3	11634	0.2	1	58170		58170		1.72E-05				
	Level 4	23660	0.4	1	59150		59150		1.69E-05				
	Level 5	48984	0.8	1	61230		61230		1.63E-05				
	Level 6	122263	2	1	61131.5		61132		1.64E-05				
Average CF					60359.4		60359.5						
3-NT	Level 1	2442	0.04	1	61050	3.76	61050	3.764	1.64E-05	1.75E-05	nr	1.0000	nr
	Level 2	5625	0.1	1	56250		56250		1.78E-05				
	Level 3	11004	0.2	1	55020		55020		1.82E-05				
	Level 4	22312	0.4	1	55780		55780		1.79E-05				
	Level 5	46150	0.8	1	57687.5		57688		1.73E-05				
	Level 6	115901	2	1	57950.5		57951		1.73E-05				
Average CF					57289.7		57289.8						
4-NT	Level 1	1997	0.04	1	49925	2.70	49925	2.702	2.00E-05	2.09E-05	nr	1.0000	nr
	Level 2	4752	0.1	1	47520		47520		2.10E-05				
	Level 3	9295	0.2	1	46475		46475		2.15E-05				
	Level 4	18603	0.4	1	46507.5		46508		2.15E-05				
	Level 5	38518	0.8	1	48147.5		48148		2.08E-05				
	Level 6	96498	2	1	48249		48249		2.07E-05				
Average CF					47804.0		46970.8						

nr - not reported
 TNB - trinitrobenzene
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 TNT - trinitrotoluene
 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 8/9/2007

SDG: 500-6089, 500-6650, 500-6651, 500-6714
Instrument: 35

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2338	0.02	1	116900	5.74	116900	5.742	8.55E-06	9.55E-06	nr	1.0000	nr
	Level 2	5039	0.05	1	100780		100780		9.92E-06				
	Level 3	10540	0.1	1	105400		105400		9.49E-06				
	Level 4	20479	0.2	1	102395		102395		9.77E-06				
	Level 5	40639	0.4	1	101597.5		101598		9.84E-06				
	Level 6	103039	1	1	103039		103039		9.71E-06				
Average CF					105018.6		105018.7						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1639	0.02	1	81950	1.84	81950	1.838	1.22E-05	1.19E-05	nr	0.9999	nr
	Level 2	4209	0.05	1	84180		84180		1.19E-05				
	Level 3	8503	0.1	1	85030		85030		1.18E-05				
	Level 4	16747	0.2	1	83735		83735		1.19E-05				
	Level 5	33576	0.4	1	83940		83940		1.19E-05				
	Level 6	86643	1	1	86643		86643		1.15E-05				
Average CF					84246.3		84246.3						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3314	0.02	1	165700	1.46	165700	1.465	6.04E-06	6.01E-06	nr	1.0000	nr
	Level 2	8150	0.05	1	163000		163000		6.13E-06				
	Level 3	16552	0.1	1	165520		165520		6.04E-06				
	Level 4	33925	0.2	1	169625		169625		5.90E-06				
	Level 5	66375	0.4	1	165937.5		165938		6.03E-06				
	Level 6	168908	1	1	168908		168908		5.92E-06				
Average CF					166448.4		166448.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2012	0.02	1	100600	1.09	100600	1.088	9.94E-06	1.00E-05	nr	1.0000	nr
	Level 2	4921	0.05	1	98420		98420		1.02E-05				
	Level 3	9838	0.1	1	98380		98380		1.02E-05				
	Level 4	20095	0.2	1	100475		100475		9.95E-06				
	Level 5	40009	0.4	1	100022.5		100023		1.00E-05				
	Level 6	100713	1	1	100713		100713		9.93E-06				
Average CF					99768.4		99768.5						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	3827	0.02	1	191350	1.96	191350	1.964	5.23E-06	5.07E-06	nr	1.0000	nr
	Level 2	9781	0.05	1	195620		195620		5.11E-06				
	Level 3	19601	0.1	1	196010		196010		5.10E-06				
	Level 4	40277	0.2	1	201385		201385		4.97E-06				
	Level 5	79485	0.4	1	198712.5		198713		5.03E-06				
	Level 6	201377	1	1	201377		201377		4.97E-06				
Average CF					197409.1		197409.2						

nr - not reported
 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	3690	0.04	1	92250	1.83	92250	1.825	1.08E-05	1.08E-05	nr	0.9999	nr
	Level 2	9090	0.1	1	90900		90900		1.10E-05				
	Level 3	18336	0.2	1	91680		91680		1.09E-05				
	Level 4	38092	0.4	1	95230		95230		1.05E-05				
	Level 5	73825	0.8	1	92281.25		92281		1.08E-05				
	Level 6	189070	2	1	94535		94535		1.06E-05				
Average CF					92812.7		92812.7						
NB	Level 1	2640	0.02	1	132000	1.28	132000	1.276	7.58E-06	7.73E-06	nr	1.0000	nr
	Level 2	6422	0.05	1	128440		128440		7.79E-06				
	Level 3	12750	0.1	1	127500		127500		7.84E-06				
	Level 4	26126	0.2	1	130630		130630		7.66E-06				
	Level 5	51407	0.4	1	128517.5		128518		7.78E-06				
	Level 6	129688	1	1	129688		129688		7.71E-06				
Average CF					129462.6		129462.7						
2,4,6-TNT	Level 1	2052	0.02	1	102600	3.47	102600	3.474	9.75E-06	9.28E-06	nr	0.9999	nr
	Level 2	5651	0.05	1	113020		113020		8.85E-06				
	Level 3	10592	0.1	1	105920		105920		9.44E-06				
	Level 4	22062	0.2	1	110310		110310		9.07E-06				
	Level 5	42387	0.4	1	105967.5		105968		9.44E-06				
	Level 6	109474	1	1	109474		109474		9.13E-06				
Average CF					107881.9		107882.0						
2-AM-4,6-DNT	Level 1	3351	0.04	1	83775	4.48	83775	4.481	1.19E-05	1.09E-05	nr	1.0000	nr
	Level 2	9547	0.1	1	95470		95470		1.05E-05				
	Level 3	18375	0.2	1	91875		91875		1.09E-05				
	Level 4	37339	0.4	1	93347.5		93348		1.07E-05				
	Level 5	73305	0.8	1	91631.25		91631		1.09E-05				
	Level 6	187689	2	1	93844.5		93845		1.07E-05				
Average CF					91657.2		91657.3						
4-AM-2,6-DNT	Level 1	2413	0.04	1	60325	5.30	60325	5.300	1.66E-05	1.51E-05	nr	0.9999	nr
	Level 2	7100	0.1	1	71000		71000		1.41E-05				
	Level 3	13244	0.2	1	66220		66220		1.51E-05				
	Level 4	27128	0.4	1	67820		67820		1.47E-05				
	Level 5	52838	0.8	1	66047.5		66048		1.51E-05				
	Level 6	135678	2	1	67839		67839		1.47E-05				
Average CF					66541.9		66542.0						

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 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	2457	0.02	1	122850	2.30	122850	2.295	8.14E-06	7.81E-06	nr	1.0000	nr
	Level 2	6461	0.05	1	129220		129220		7.74E-06				
	Level 3	12730	0.1	1	127300		127300		7.86E-06				
	Level 4	26193	0.2	1	130965		130965		7.64E-06				
	Level 5	51249	0.4	1	128122.5		128123		7.81E-06				
	Level 6	130470	1	1	130470		130470		7.66E-06				
Average CF					128154.6		128154.7						
2,6-DNT	Level 1	2434	0.04	1	60850	3.98	60850	3.980	1.64E-05	1.52E-05	nr	1.0000	nr
	Level 2	6728	0.1	1	67280		67280		1.49E-05				
	Level 3	13207	0.2	1	66035		66035		1.51E-05				
	Level 4	27162	0.4	1	67905		67905		1.47E-05				
	Level 5	53183	0.8	1	66478.75		66479		1.50E-05				
	Level 6	135164	2	1	67582		67582		1.48E-05				
Average CF					66021.8		66021.8						
2-NT	Level 1	2052	0.04	1	51300	1.93	51300	1.932	1.95E-05	1.91E-05	nr	1.0000	nr
	Level 2	5176	0.1	1	51760		51760		1.93E-05				
	Level 3	10416	0.2	1	52080		52080		1.92E-05				
	Level 4	21670	0.4	1	54175		54175		1.85E-05				
	Level 5	41776	0.8	1	52220		52220		1.91E-05				
	Level 6	105734	2	1	52867		52867		1.89E-05				
Average CF					52400.3		52400.3						
3-NT	Level 1	1742	0.04	1	43550	6.05	43550	6.048	2.30E-05	2.07E-05	nr	0.9999	nr
	Level 2	4703	0.1	1	47030		47030		2.13E-05				
	Level 3	9718	0.2	1	48590		48590		2.06E-05				
	Level 4	20709	0.4	1	51772.5		51773		1.93E-05				
	Level 5	39617	0.8	1	49521.25		49521		2.02E-05				
	Level 6	101303	2	1	50651.5		50652		1.97E-05				
Average CF					48519.2		48519.3						
4-NT	Level 1	1685	0.04	1	42125	1.86	42125	1.855	2.37E-05	2.36E-05	nr	0.9999	nr
	Level 2	4267	0.1	1	42670		42670		2.34E-05				
	Level 3	8314	0.2	1	41570		41570		2.41E-05				
	Level 4	17514	0.4	1	43785		43785		2.28E-05				
	Level 5	33520	0.8	1	41900		41900		2.39E-05				
	Level 6	85509	2	1	42754.5		42755		2.34E-05				
Average CF					42467.4		42467.5						

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 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Laboratory: Severn Trent
Calibration Date: 10/3/2007

SDG: 500-7047
Instrument: 35

CF = Response/mass injected (ng) mass injected (ng) = calibration std (ug/ml) * amount injected (ul) RF = concentration/peak height

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
HMX	Level 1	2264	0.02	1	113200	2.71	113200	2.713	8.83E-06	9.20E-06	nr	1.0000	nr
	Level 2	5246	0.05	1	104920		104920		9.53E-06				
	Level 3	11023	0.1	1	110230		110230		9.07E-06				
	Level 4	21296	0.2	1	106480		106480		9.39E-06				
	Level 5	43160	0.4	1	107900		107900		9.27E-06				
	Level 6	109747	1	1	109747		109747		9.11E-06				
Average CF					108746.2		108746.2						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
RDX	Level 1	1674	0.02	1	83700	2.75	83700	2.755	1.19E-05	1.14E-05	nr	1.0000	nr
	Level 2	4311	0.05	1	86220		86220		1.16E-05				
	Level 3	8665	0.1	1	86650		86650		1.15E-05				
	Level 4	17811	0.2	1	89055		89055		1.12E-05				
	Level 5	36078	0.4	1	90195		90195		1.11E-05				
	Level 6	89101	1	1	89101		89101		1.12E-05				
Average CF					87486.8		87486.8						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3,5-TNB	Level 1	3687	0.02	1	184350	2.71	184350	2.711	5.42E-06	5.66E-06	nr	1.0000	nr
	Level 2	8612	0.05	1	172240		172243		5.81E-06				
	Level 3	17935	0.1	1	179350		179350		5.58E-06				
	Level 4	34312	0.2	1	171560		171560		5.83E-06				
	Level 5	70123	0.4	1	175307.5		175308		5.70E-06				
	Level 6	177707	1	1	177707		177707		5.63E-06				
Average CF					176752.4		176753.0						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,2-DNB	Level 1	2307	0.02	1	115350	4.99	115350	4.99	8.67E-06	9.53E-06	nr	1.0000	nr
	Level 2	5168	0.05	1	103360		103360		9.67E-06				
	Level 3	10546	0.1	1	105460		105460		9.48E-06				
	Level 4	20129	0.2	1	100645		100645		9.94E-06				
	Level 5	41169	0.4	1	102922.5		102923		9.72E-06				
	Level 6	102922	1	1	102922		102922		9.72E-06				
Average CF					105109.9		105110.0						

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
1,3-DNB	Level 1	4477	0.02	1	223850	3.74	223850	3.738	4.47E-06	4.78E-06	nr	1.0000	nr
	Level 2	10317	0.05	1	206340		206340		4.85E-06				
	Level 3	21139	0.1	1	211390		211390		4.73E-06				
	Level 4	40255	0.2	1	201275		201275		4.97E-06				
	Level 5	82226	0.4	1	205565		205565		4.86E-06				
	Level 6	207549	1	1	207549		207549		4.82E-06				
Average CF					209328.2		209328.2						

nr - not reported
 TNB - trinitrobenzene
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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
TETRYL	Level 1	4135	0.04	1	103375	2.47	103375	2.471	9.67E-06	9.92E-06	nr	0.9999	nr
	Level 2	10115	0.1	1	101150		101150		9.89E-06				
	Level 3	20697	0.2	1	103485		103485		9.66E-06				
	Level 4	38763	0.4	1	96907.5		96908		1.03E-05				
	Level 5	79527	0.8	1	99408.75		99409		1.01E-05				
	Level 6	202206	2	1	101103		101103		9.89E-06				
Average CF					100904.9		100905.0						
NB	Level 1	2819	0.02	1	140950	3.81	140950	3.805	7.09E-06	7.54E-06	nr	1.0000	nr
	Level 2	6709	0.05	1	134180		134180		7.45E-06				
	Level 3	13476	0.1	1	134760		134760		7.42E-06				
	Level 4	25317	0.2	1	126585		126585		7.90E-06				
	Level 5	51818	0.4	1	129545		129545		7.72E-06				
	Level 6	130311	1	1	130311		130311		7.67E-06				
Average CF					132721.8		132721.8						
2,4,6-TNT	Level 1	2346	0.02	1	117300	3.65	117300	3.648	8.53E-06	8.66E-06	nr	0.9999	nr
	Level 2	6115	0.05	1	122300		122300		8.18E-06				
	Level 3	11702	0.1	1	117020		117020		8.55E-06				
	Level 4	22098	0.2	1	110490		110490		9.05E-06				
	Level 5	44849	0.4	1	112122.5		112123		8.92E-06				
	Level 6	114612	1	1	114612		114612		8.73E-06				
Average CF					115640.8		115640.8						
2-AM-4,6-DNT	Level 1	3911	0.04	1	97775	1.84	97775	1.844	1.02E-05	1.03E-05	nr	1.0000	nr
	Level 2	10020	0.1	1	100200		100200		9.98E-06				
	Level 3	19536	0.2	1	97680		97680		1.02E-05				
	Level 4	38008	0.4	1	95020		95020		1.05E-05				
	Level 5	76677	0.8	1	95846.25		95846		1.04E-05				
	Level 6	194445	2	1	97222.5		97223		1.03E-05				
Average CF					97290.6		97290.7						
4-AM-2,6-DNT	Level 1	2888	0.04	1	72200	3.00	72200	3.001	1.39E-05	1.40E-05	nr	1.0000	nr
	Level 2	7500	0.1	1	75000		75000		1.33E-05				
	Level 3	14225	0.2	1	71125		71125		1.41E-05				
	Level 4	27670	0.4	1	69175		69175		1.45E-05				
	Level 5	55612	0.8	1	69515		69515		1.44E-05				
	Level 6	141000	2	1	70500		70500		1.42E-05				
Average CF					71252.5		71252.5						

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TABLE E-1

INITIAL CALIBRATION CALCULATION VERIFICATION

Joliet Army Ammunition Plant
SRU 2 and SRU 3

Compound	Standard	Response	Cal Std	Injected amount	Recalculated		Reported		Recalculated		Reported AVE RF	Recalculated Corr. Coeff.	Reported Corr. Coeff.
					CF	%RSD	CF	%RSD	RF	AVE RF			
2,4-DNT	Level 1	2640	0.02	1	132000	3.10	132000	3.098	7.58E-06	7.39E-06	nr	0.9999	nr
	Level 2	7114	0.05	1	142280		142280		7.03E-06				
	Level 3	13827	0.1	1	138270		138270		7.23E-06				
	Level 4	26399	0.2	1	131995		131995		7.58E-06				
	Level 5	52952	0.4	1	132380		132380		7.55E-06				
	Level 6	135873	1	1	135873		135873		7.36E-06				
Average CF					135466.3		135466.3						
2,6-DNT	Level 1	2855	0.04	1	71375	2.96	71375	2.965	1.40E-05	1.40E-05	nr	0.9999	nr
	Level 2	7484	0.1	1	74840		74840		1.34E-05				
	Level 3	14426	0.2	1	72130		72130		1.39E-05				
	Level 4	27660	0.4	1	69150		69150		1.45E-05				
	Level 5	55374	0.8	1	69217.5		69218		1.44E-05				
	Level 6	141837	2	1	70918.5		70919		1.41E-05				
Average CF					71271.8		71272.0						
2-NT	Level 1	2268	0.04	1	56700	2.55	56700	2.546	1.76E-05	1.84E-05	nr	0.9999	nr
	Level 2	5488	0.1	1	54880		54880		1.82E-05				
	Level 3	10939	0.2	1	54695		54695		1.83E-05				
	Level 4	21438	0.4	1	53595		53595		1.87E-05				
	Level 5	42064	0.8	1	52580		52580		1.90E-05				
	Level 6	108349	2	1	54174.5		54175		1.85E-05				
Average CF					54437.4		54437.5						
3-NT	Level 1	2093	0.04	1	52325	3.48	52325	3.481	1.91E-05	1.95E-05	nr	0.9998	nr
	Level 2	5106	0.1	1	51060		51060		1.96E-05				
	Level 3	10867	0.2	1	54335		54335		1.84E-05				
	Level 4	19889	0.4	1	49722.5		49723		2.01E-05				
	Level 5	39602	0.8	1	49502.5		49503		2.02E-05				
	Level 6	102941	2	1	51470.5		51471		1.94E-05				
Average CF					51402.6		51402.8						
4-NT	Level 1	1795	0.04	1	44875	2.70	44875	2.701	2.23E-05	2.30E-05	nr	0.9999	nr
	Level 2	4421	0.1	1	44210		44210		2.26E-05				
	Level 3	8850	0.2	1	44250		44250		2.26E-05				
	Level 4	16985	0.4	1	42462.5		42453		2.36E-05				
	Level 5	33467	0.8	1	41833.75		41834		2.39E-05				
	Level 6	86408	2	1	43204		43204		2.31E-05				
Average CF					43472.5		43471.0						

nr - not reported
 TNB - trinitrobenzene
 DNB - dinitrobenzene
 NB - nitrobenzene
 TNT - trinitrotoluene
 AM - amino
 DNT - dinitrotoluene
 NT - nitrotoluene

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 15)

Laboratory: Severn Trent
Calibration Date: 7/29/2006

SDG: 247884
Time: 0718

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	45735	0.4	1	1	114337.5	114338	111385	2.65	2.70
RDX	35715	0.4	1	1	89287.5	89288	88885	0.45	0.50
1,3,5-TNB	72482	0.4	1	1	181205.0	181205	179021	1.22	1.20
1,3-DNB	88340	0.4	1	1	220850.0	220850	218561	1.05	1.00
NB	56259	0.4	1	1	140647.5	140648	138689	1.41	1.40
TETRYL	73521	0.8	1	1	91901.3	91901	97401	5.65	5.60
2,4,6-TNT	41792	0.4	1	1	104480.0	104480	116914	10.64	10.60
4-AM2,6-DNT	60112	0.8	1	1	75140.0	75140	73071	2.83	2.80
2-AM-4,6-DNT	79381	0.8	1	1	99226.3	99226	99017	0.21	0.20
2,6-DNT	57289	0.8	1	1	71611.3	71611	69727	2.70	2.70
2,4-DNT	57793	0.4	1	1	144482.5	144483	140031	3.18	3.20
2-NT	45378	0.8	1	1	56722.5	567223	56062	1.18	1.20
4-NT	36868	0.8	1	1	46085.0	46085	45439	1.42	1.40
3-NT	43622	0.8	1	1	54527.5	54528	52043	4.77	4.80

Laboratory: Severn Trent
Calibration Date: 10/7/2006

SDG: 249025
Time: 2045

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	21900	0.2	1	1	109500.0	109500	114988	4.77	4.80
RDX	18672	0.2	1	1	93360.0	93360	92745	0.66	0.70
1,3,5-TNB	37210	0.2	1	1	186050.0	186050	189307	1.72	1.70
1,3-DNB	43357	0.2	1	1	216785.0	216785	223263	2.90	2.90
NB	28339	0.2	1	1	141695.0	141695	145388	2.54	2.50
TETRYL	41382	0.4	1	1	103455.0	103455	105777	2.20	2.20
2,4,6-TNT	23949	0.2	1	1	119745.0	119745	122592	2.32	2.30
4-AM2,6-DNT	29462	0.4	1	1	73655.0	73655	73645	0.01	0.00
2-AM-4,6-DNT	40951	0.4	1	1	102377.5	102378	103215	0.81	0.80
2,6-DNT	29581	0.4	1	1	73952.5	73953	75049	1.46	1.50
2,4-DNT	27671	0.2	1	1	138355.0	138355	139849	1.07	1.10
2-NT	23435	0.4	1	1	58587.5	58588	60682	3.45	3.50
4-NT	18838	0.4	1	1	47095.0	47095	48746	3.39	3.40
3-NT	22045	0.4	1	1	55112.5	55113	57835	4.71	4.70

Laboratory: Severn Trent
Calibration Date: 10/17/2006

SDG: 249144
Time: 1054

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	45057	0.4	1	1	112642.5	112643	114587	1.70	1.70
RDX	36916	0.4	1	1	92290.0	92290	93014	0.78	0.80
1,3,5-TNB	69073	0.4	1	1	172682.5	172683	173044	0.21	0.20
1,3-DNB	82485	0.4	1	1	206212.5	206213	206803	0.29	0.30
NB	50225	0.4	1	1	125562.5	125563	124086	1.19	1.20
TETRYL	78601	0.8	1	1	98251.3	98251	93450	5.14	5.10
2,4,6-TNT	42951	0.4	1	1	107377.5	107378	107736	0.33	0.30
4-AM2,6-DNT	54738	0.8	1	1	68422.5	68423	73529	6.94	6.90
2-AM-4,6-DNT	75407	0.8	1	1	94258.8	94259	97156	2.98	3.00
2,6-DNT	55304	0.8	1	1	69130.0	69130	70561	2.03	2.00
2,4-DNT	51034	0.4	1	1	127585.0	127585	128831	0.97	1.00
2-NT	42392	0.8	1	1	52990.0	52990	51964	1.97	2.00
4-NT	33430	0.8	1	1	41787.5	41788	40553	3.04	3.00
3-NT	39665	0.8	1	1	49581.3	49581	47918	3.47	3.50

CCV - continuing calibration verification
IC - initial calibration
%D - percent difference
SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification
Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 15)

Laboratory: Severn Trent
 Calibration Date: 10/21/2006

SDG: 249183
 Time: 0457

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
2,4-DNT	52434	0.4	1	1	131085.0	131085	137746	4.84	4.80

Laboratory: Severn Trent
 Calibration Date: 11/2/2006

SDG: 249398
 Time: 1916

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	18471	0.2	1	1	92355.0	92355	99124	6.83	6.80
RDX	15012	0.2	1	1	75060.0	75060	80763	7.06	7.10
1,3,5-TNB	28398	0.2	1	1	141990.0	141990	153911	7.75	7.70
1,3-DNB	33636	0.2	1	1	168180.0	168180	182813	8.00	8.00
NB	21705	0.2	1	1	108525.0	108525	119002	8.80	8.80
TETRYL	31071	0.4	1	1	77677.5	77678	84336	7.90	7.90
2,4,6-TNT	17589	0.2	1	1	87945.0	87945	96173	8.56	8.60
4-AM2,6-DNT	21900	0.4	1	1	54750.0	54750	59958	8.69	8.70
2-AM-4,6-DNT	30748	0.4	1	1	76870.0	76870	84032	8.52	8.50
2,6-DNT	22368	0.4	1	1	55920.0	55920	60398	7.41	7.40
2,4-DNT	22338	0.2	1	1	111690.0	111690	114479	2.44	2.40
2-NT	17447	0.4	1	1	43617.5	43618	47489	8.15	8.20
4-NT	14221	0.4	1	1	35552.5	35553	37723	5.75	5.80
3-NT	16639	0.4	1	1	41597.5	41598	43875	5.19	5.20

Laboratory: Severn Trent
 Calibration Date: 11/11/2006

SDG: 249477
 Time: 2214

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
2,4-DNT	25598	0.2	1	1	127990.0	127990	132198	3.18	3.20

Laboratory: Severn Trent
 Calibration Date: 11/22/2006

SDG: 249602
 Time: 0017

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	44738	0.4	1	1	111845.0	111845	114183	2.05	2.00
RDX	37655	0.4	1	1	94137.5	94138	92457	1.82	1.80
1,3,5-TNB	70518	0.4	1	1	176295.0	176295	179270	1.66	1.70
1,3-DNB	82936	0.4	1	1	207340.0	207340	209613	1.08	1.10
NB	50199	0.4	1	1	125497.5	125498	126921	1.12	1.10
TETRYL	76463	0.8	1	1	95578.8	95579	100126	4.54	4.50
2,4,6-TNT	43961	0.4	1	1	109902.5	109903	112708	2.49	2.50
4-AM2,6-DNT	57483	0.8	1	1	71853.8	71854	71928	0.10	0.10
2-AM-4,6-DNT	77053	0.8	1	1	96316.3	96316	98102	1.82	1.80
2,6-DNT	55843	0.8	1	1	69803.8	69804	71691	2.63	2.60
2,4-DNT	51672	0.4	1	1	129180.0	129180	132198	2.28	2.30
2-NT	41200	0.8	1	1	51500.0	51500	52529	1.96	2.00
4-NT	32380	0.8	1	1	40475.0	40475	41478	2.42	2.40
3-NT	38687	0.8	1	1	48358.8	48359	49599	2.50	2.50

CCV - continuing calibration verification
 IC - initial calibration
 %D - percent difference
 SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 11/22/2006

SDG: 249603
Time: 0017

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	44738	0.4	1	1	111845.0	111845	114183	2.05	2.00
RDX	37655	0.4	1	1	94137.5	94138	92457	1.82	1.80
1,3,5-TNB	70518	0.4	1	1	176295.0	176295	179270	1.66	1.70
1,3-DNB	82936	0.4	1	1	207340.0	207340	209613	1.08	1.10
NB	50199	0.4	1	1	125497.5	125498	126921	1.12	1.10
TETRYL	76463	0.8	1	1	95578.8	95579	100126	4.54	4.50
2,4,6-TNT	43961	0.4	1	1	109902.5	109903	112708	2.49	2.50
4-AM2,6-DNT	57483	0.8	1	1	71853.8	71854	71928	0.10	0.10
2-AM-4,6-DNT	77053	0.8	1	1	96316.3	96316	98102	1.82	1.80
2,6-DNT	55843	0.8	1	1	69803.8	69804	71691	2.63	2.60
2,4-DNT	51672	0.4	1	1	129180.0	129180	132198	2.28	2.30
2-NT	41200	0.8	1	1	51500.0	51500	52529	1.96	2.00
4-NT	32380	0.8	1	1	40475.0	40475	41478	2.42	2.40
3-NT	38687	0.8	1	1	48358.8	48359	49599	2.50	2.50

Laboratory: Severn Trent
Calibration Date: 12/7/2006

SDG: 249776
Time: 2122

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	22724	0.2	1	1	113620.0	113620	114183	0.49	0.50
RDX	18517	0.2	1	1	92585.0	92585	92457	0.14	0.10
1,3,5-TNB	37016	0.2	1	1	185080.0	185080	179270	3.24	3.20
1,3-DNB	43154	0.2	1	1	215770.0	215770	209613	2.94	2.90
NB	26251	0.2	1	1	131255.0	131255	126921	3.41	3.40
TETRYL	42174	0.4	1	1	105435.0	105435	100126	5.30	5.30
2,4,6-TNT	23747	0.2	1	1	118735.0	118735	112708	5.35	5.30
4-AM2,6-DNT	29699	0.4	1	1	74247.5	74248	71928	3.22	3.20
2-AM-4,6-DNT	40150	0.4	1	1	100375.0	100375	98102	2.32	2.30
2,6-DNT	29637	0.4	1	1	74092.5	74093	71691	3.35	3.30
2,4-DNT	27732	0.2	1	1	138660.0	138660	132198	4.89	4.90
2-NT	21948	0.4	1	1	54870.0	54870	52529	4.46	4.50
4-NT	17246	0.4	1	1	43115.0	43115	41478	3.95	3.90
3-NT	20731	0.4	1	1	51827.5	51828	49599	4.49	4.50

Laboratory: Severn Trent
Calibration Date: 12/29/2006

SDG: 249944
Time: 0015

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	45878	0.4	1	1	114695.0	114695	114183	0.45	0.40
RDX	36223	0.4	1	1	90557.5	90558	92457	2.05	2.10
1,3,5-TNB	72409	0.4	1	1	181022.5	181023	179270	0.98	1.00
1,3-DNB	84677	0.4	1	1	211692.5	103655	209613	0.99	1.00
NB	51786	0.4	1	1	129465.0	211693	126921	2.00	2.00
TETRYL	74463	0.8	1	1	93078.8	93079	100126	7.04	7.00
2,4,6-TNT	40504	0.4	1	1	101260.0	101260	112708	10.16	10.20
4-AM2,6-DNT	62589	0.8	1	1	78236.3	78236	71928	8.77	8.80
2-AM-4,6-DNT	79791	0.8	1	1	99738.8	99739	98102	1.67	1.70
2,6-DNT	60353	0.8	1	1	75441.3	75441	71691	5.23	5.20
2,4-DNT	56336	0.4	1	1	140840.0	140840	132198	6.54	6.50
2-NT	44054	0.8	1	1	55067.5	55068	52529	4.83	4.80
4-NT	34391	0.8	1	1	42988.8	42989	41478	3.64	3.60
3-NT	40920	0.8	1	1	51150.0	51150	49599	3.13	3.10

CCV - continuing calibration verification
IC - initial calibration
%D - percent difference
SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 1/11/2007

SDG: 250012
Time: 1824

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	45784	0.4	1	1	114460.0	114460	114183	0.24	0.20
RDX	37670	0.4	1	1	94175.0	94175	92457	1.86	1.90
1,3,5-TNB	73187	0.4	1	1	182967.5	182968	179270	2.06	2.10
1,3-DNB	85875	0.4	1	1	214687.5	214688	209613	2.42	2.40
NB	52513	0.4	1	1	131282.5	131283	126921	3.44	3.40
TETRYL	82462	0.8	1	1	103077.5	103078	100126	2.95	2.90
2,4,6-TNT	46804	0.4	1	1	117010.0	117010	112708	3.82	3.80
4-AM2,6-DNT	58976	0.8	1	1	73720.0	73720	71928	2.49	2.50
2-AM-4,6-DNT	79845	0.8	1	1	99806.3	99806	98102	1.74	1.70
2,6-DNT	58534	0.8	1	1	73167.5	73168	71691	2.06	2.10
2,4-DNT	55220	0.4	1	1	138050.0	138050	132198	4.43	4.40
2-NT	43203	0.8	1	1	54003.8	54004	52529	2.81	2.80
4-NT	34102	0.8	1	1	42627.5	42628	41478	2.77	2.80
3-NT	40761	0.8	1	1	50951.3	50951	49599	2.73	2.70

Laboratory: Severn Trent
Calibration Date: 2/1/2007

SDG: 250165
Time: 0016

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	22735	0.2	1	1	113675.0	113675	114183	0.44	0.40
RDX	18539	0.2	1	1	92695.0	92695	92457	0.26	0.30
1,3,5-TNB	37184	0.2	1	1	185920.0	18920	179270	3.71	3.70
1,3-DNB	44072	0.2	1	1	220360.0	220360	209613	5.13	5.10
NB	26974	0.2	1	1	134870.0	134870	126921	6.26	6.30
TETRYL	42895	0.4	1	1	107237.5	107238	100126	7.10	7.10
2,4,6-TNT	24067	0.2	1	1	120335.0	120335	112708	6.77	6.80
4-AM2,6-DNT	29614	0.4	1	1	74035.0	74035	71928	2.93	2.90
2-AM-4,6-DNT	40190	0.4	1	1	100475.0	11475	98102	2.42	2.40
2,6-DNT	29943	0.4	1	1	74857.5	74858	71691	4.42	4.40
2,4-DNT	28438	0.2	1	1	142190.0	142190	132198	7.56	7.60
2-NT	22921	0.4	1	1	57302.5	57303	52529	9.09	9.10
4-NT	18387	0.4	1	1	45967.5	45968	41478	10.82	10.80
3-NT	21268	0.4	1	1	53170.0	53170	49599	7.20	7.20

Laboratory: Severn Trent
Calibration Date: 2/13/2007

SDG: 250224
Time: 1416

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	39565	0.4	1	1	98912.5	98913	107194	7.73	7.70
RDX	32293	0.4	1	1	80732.5	8073	87341	7.57	7.60
1,3,5-TNB	63100	0.4	1	1	157750.0	157750	168116	6.17	6.20
1,3-DNB	74062	0.4	1	1	185155.0	185155	201224	7.99	8.00
NB	47506	0.4	1	1	118765.0	118765	130505	9.00	9.00
TETRYL	69224	0.8	1	1	86530.0	86530	93897	7.85	7.80
2,4,6-TNT	39281	0.4	1	1	98202.5	98203	107983	9.06	9.10
4-AM2,6-DNT	48615	0.8	1	1	60768.8	60769	66822	9.06	9.10
2-AM-4,6-DNT	67463	0.8	1	1	84328.8	84329	93246	9.56	9.60
2,6-DNT	52673	0.8	1	1	65841.3	65841	68207	3.47	3.50
2,4-DNT	47634	0.4	1	1	119085.0	119085	125837	5.37	5.40
2-NT	37624	0.8	1	1	47030.0	47030	51714	9.06	9.10
4-NT	30471	0.8	1	1	38088.8	38089	41620	8.48	8.50
3-NT	36378	0.8	1	1	45472.5	45473	49511	8.16	8.20

CCV - continuing calibration verification
IC - initial calibration
%D - percent difference
SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 2/23/2007

SDG: 250253
Time: 1527

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	43499	0.4	1	1	108747.5	108748	106937	1.69	1.70
RDX	33799	0.4	1	1	84497.5	84498	85921	1.66	1.70
1,3,5-TNB	72630	0.4	1	1	181575.0	181575	178025	1.99	2.00
1,3-DNB	85794	0.4	1	1	214485.0	214485	210216	2.03	2.00
NB	55901	0.4	1	1	139752.5	139753	137723	1.47	1.50
TETRYL	83690	0.8	1	1	104612.5	104613	101706	2.86	2.90
2,4,6-TNT	47849	0.4	1	1	119622.5	119623	115754	3.34	3.30
4-AM2,6-DNT	56378	0.8	1	1	70472.5	70473	70477	0.01	0.00
2-AM-4,6-DNT	79379	0.8	1	1	99223.8	99224	98306	0.93	0.90
2,6-DNT	59766	0.8	1	1	74707.5	74708	71706	4.19	4.20
2,4-DNT	56352	0.4	1	1	140880.0	140880	133792	5.30	5.30
2-NT	46865	0.8	1	1	58581.3	58581	56040	4.53	4.50
4-NT	37872	0.8	1	1	47340.0	47340	45694	3.60	3.60
3-NT	45357	0.8	1	1	56696.3	56696	53202	6.57	6.60

Laboratory: Severn Trent
Calibration Date: 2/24/2007

SDG: 250262
Time: 2032

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	21509	0.2	1	1	107545.0	107545	106937	0.57	0.60
RDX	17948	0.2	1	1	89740.0	89740	85921	4.44	4.40
1,3,5-TNB	35111	0.2	1	1	175555.0	175555	178025	1.39	1.40
1,3-DNB	41879	0.2	1	1	209395.0	209395	210216	0.39	0.40
NB	27159	0.2	1	1	135795.0	135795	137723	1.40	1.40
TETRYL	39249	0.4	1	1	98122.5	98123	101706	3.52	3.50
2,4,6-TNT	22571	0.2	1	1	112855.0	112905	115754	2.50	2.50
4-AM2,6-DNT	28082	0.4	1	1	70205.0	70205	70477	0.39	0.40
2-AM-4,6-DNT	38943	0.4	1	1	97357.5	97358	98306	0.96	1.00
2,6-DNT	27713	0.4	1	1	69282.5	69283	71706	3.38	3.40
2,4-DNT	26045	0.2	1	1	130225.0	130225	133792	2.67	2.70
2-NT	21710	0.4	1	1	54275.0	54275	56040	3.15	3.20
4-NT	17492	0.4	1	1	43730.0	43730	45694	4.30	4.30
3-NT	20902	0.4	1	1	52255.0	52255	53202	1.78	1.80

Laboratory: Severn Trent
Calibration Date: 2/28/2007

SDG: 250274
Time: 1220

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	22147	0.2	1	1	110735.0	110735	106937	3.55	3.60
RDX	17672	0.2	1	1	88360.0	88360	85921	2.84	2.80
1,3,5-TNB	36746	0.2	1	1	183730.0	183730	178025	3.20	3.20
1,3-DNB	43955	0.2	1	1	219775.0	219775	210216	4.55	4.50
NB	28526	0.2	1	1	142630.0	142630	137723	3.56	3.60
TETRYL	41959	0.4	1	1	104897.5	104898	101706	3.14	3.10
2,4,6-TNT	24374	0.2	1	1	121870.0	121870	115754	5.28	5.30
4-AM2,6-DNT	29634	0.4	1	1	74085.0	74085	70477	5.12	5.10
2-AM-4,6-DNT	41195	0.4	1	1	102987.5	102988	98306	4.76	4.80
2,6-DNT	30136	0.4	1	1	75340.0	75340	71706	5.07	5.10
2,4-DNT	28364	0.2	1	1	141820.0	141820	133792	6.00	6.00
2-NT	23627	0.4	1	1	59067.5	59068	56040	5.40	5.40
4-NT	18884	0.4	1	1	47210.0	47210	45694	3.32	3.30
3-NT	22404	0.4	1	1	56010.0	56010	53202	5.28	5.30

CCV - continuing calibration verification
IC - initial calibration
%D - percent difference
SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 3/2/2007

SDG: 250285
Time: 2031

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	21796	0.2	1	1	108980.0	108980	106937	1.91	1.90
RDX	18018	0.2	1	1	90090.0	90090	85921	4.85	4.90
1,3,5-TNB	36890	0.2	1	1	184450.0	184450	178025	3.61	3.60
1,3-DNB	43172	0.2	1	1	215860.0	215860	210216	2.68	2.70
NB	28367	0.2	1	1	141835.0	141835	137723	2.99	3.00
TETRYL	40931	0.4	1	1	102327.5	102328	101706	0.61	0.60
2,4,6-TNT	24407	0.2	1	1	122035.0	122035	115754	5.43	5.40
4-AM2,6-DNT	29244	0.4	1	1	73110.0	73110	70477	3.74	3.70
2-AM-4,6-DNT	39985	0.4	1	1	99962.5	99963	98306	1.69	1.70
2,6-DNT	29494	0.4	1	1	73735.0	73735	71706	2.83	2.80
2,4-DNT	27944	0.2	1	1	139720.0	139720	133792	4.43	4.40
2-NT	22652	0.4	1	1	56630.0	56630	56040	1.05	1.10
4-NT	18925	0.4	1	1	47312.5	47616	45694	3.54	3.50
3-NT	22118	0.4	1	1	55295.0	55295	53202	3.93	3.90

Laboratory: Severn Trent
Calibration Date: 3/2/2007

SDG: 250293
Time: 0449

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	24424	0.2	1	1	122120.0	122120	123748	1.32	1.30
RDX	20031	0.2	1	1	100155.0	100155	98696	1.48	1.50
1,3,5-TNB	38864	0.2	1	1	194320.0	194320	193853	0.24	0.20
1,3-DNB	44712	0.2	1	1	223560.0	223560	223739	0.08	0.10
NB	27436	0.2	1	1	137180.0	137180	137600	0.31	0.30
TETRYL	43243	0.4	1	1	108107.5	108108	109746	1.49	1.50
2,4,6-TNT	24888	0.2	1	1	124440.0	124440	122650	1.46	1.50
4-AM2,6-DNT	31111	0.4	1	1	77777.5	77778	77356	0.54	0.50
2-AM-4,6-DNT	41623	0.4	1	1	104057.5	104058	103889	0.16	0.20
2,6-DNT	30309	0.4	1	1	75772.5	75773	76293	0.68	0.70
2,4-DNT	27695	0.2	1	1	138475.0	138475	138611	0.10	0.10
2-NT	22439	0.4	1	1	56097.5	56095	55912	0.33	0.30
4-NT	17546	0.4	1	1	43865.0	43865	43674	0.44	0.40
3-NT	21212	0.4	1	1	53030.0	53030	53013	0.03	0.00

Laboratory: Severn Trent
Calibration Date: 3/2/2007

SDG: 250293
Time: 2031

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	21796	0.2	1	1	108980.0	108980	106937	1.91	1.90
RDX	18018	0.2	1	1	90090.0	90090	85921	4.85	4.90
1,3,5-TNB	36890	0.2	1	1	184450.0	184450	178025	3.61	3.60
1,3-DNB	43172	0.2	1	1	215860.0	215860	210216	2.68	2.70
NB	28367	0.2	1	1	141835.0	141835	137723	2.99	3.00
TETRYL	40931	0.4	1	1	102327.5	102328	101706	0.61	0.60
2,4,6-TNT	24407	0.2	1	1	122035.0	122035	115754	5.43	5.40
4-AM2,6-DNT	29244	0.4	1	1	73110.0	73110	70477	3.74	3.70
2-AM-4,6-DNT	39985	0.4	1	1	99962.5	99963	98306	1.69	1.70
2,6-DNT	29494	0.4	1	1	73735.0	73735	71706	2.83	2.80
2,4-DNT	27944	0.2	1	1	139720.0	139720	133792	4.43	4.40
2-NT	22652	0.4	1	1	56630.0	56630	56040	1.05	1.10
4-NT	18925	0.4	1	1	47312.5	47616	45694	3.54	3.50
3-NT	22118	0.4	1	1	55295.0	55295	53202	3.93	3.90

CCV - continuing calibration verification
IC - initial calibration
%D - percent difference
SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 3/7/2007

SDG: 250332
Time: 0148

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	42804	0.4	1	1	107010.0	107010	106937	0.07	0.10
RDX	31695	0.4	1	1	79237.5	79238	85921	7.78	7.80
1,3,5-TNB	68966	0.4	1	1	172415.0	172415	178025	3.15	3.20
1,3-DNB	82897	0.4	1	1	207242.5	207243	210216	1.41	1.40
NB	53119	0.4	1	1	132797.5	132798	137723	3.58	3.60
TETRYL	77869	0.8	1	1	97336.3	97336	101706	4.30	4.30
2,4,6-TNT	43691	0.4	1	1	109227.5	109228	115754	5.64	5.60
4-AM2,6-DNT	54650	0.8	1	1	68312.5	69313	70477	3.07	3.10
2-AM-4,6-DNT	76374	0.8	1	1	95467.5	95468	98306	2.89	2.90
2,6-DNT	55032	0.8	1	1	68790.0	68790	71706	4.07	4.10
2,4-DNT	51538	0.4	1	1	128845.0	128845	133792	3.70	3.70
2-NT	42605	0.8	1	1	53256.3	53253	56040	4.97	5.00
4-NT	34432	0.8	1	1	43040.0	43040	45694	5.81	5.80
3-NT	41006	0.8	1	1	51257.5	51258	53202	3.65	3.70

Laboratory: Severn Trent
Calibration Date: 3/8/2007

SDG: 250340
Time: 1032

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	20656	0.2	1	1	103280.0	10382	106937	3.42	3.40
RDX	15662	0.2	1	1	78310.0	78310	85921	8.86	8.90
1,3,5-TNB	33701	0.2	1	1	168505.0	99605	178025	5.35	5.30
1,3-DNB	40323	0.2	1	1	201615.0	201615	210216	4.09	4.10
NB	25523	0.2	1	1	127615.0	127615	137723	7.34	7.30
TETRYL	38022	0.4	1	1	95055.0	95055	101706	6.54	6.50
2,4,6-TNT	21961	0.2	1	1	109805.0	109805	115754	5.14	5.10
4-AM2,6-DNT	26652	0.4	1	1	66630.0	66630	70477	5.46	5.50
2-AM-4,6-DNT	36783	0.4	1	1	91957.5	91958	98306	6.46	6.50
2,6-DNT	27167	0.4	1	1	67917.5	67918	71706	5.28	5.30
2,4-DNT	25297	0.2	1	1	126485.0	126485	133792	5.46	5.50
2-NT	20875	0.4	1	1	52187.5	52188	56040	6.87	6.90
4-NT	16783	0.4	1	1	41957.5	41958	45694	8.18	8.20
3-NT	19804	0.4	1	1	49510.0	49510	53202	6.94	6.90

Laboratory: Severn Trent
Calibration Date: 3/15/2007

SDG: 250378
Time: 0319

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	24251	0.2	1	1	121255.0	121255	123748	2.01	2.00
RDX	19019	0.2	1	1	95095.0	95095	98696	3.65	3.60
1,3,5-TNB	38631	0.2	1	1	193155.0	193155	193853	0.36	0.40
1,3-DNB	44585	0.2	1	1	222925.0	222925	223739	0.36	0.40
NB	27390	0.2	1	1	136950.0	136950	137600	0.47	0.50
TETRYL	43930	0.4	1	1	109825.0	109825	109746	0.07	0.10
2,4,6-TNT	24771	0.2	1	1	123855.0	123855	122650	0.98	1.00
4-AM2,6-DNT	30991	0.4	1	1	77477.5	77478	77355	0.16	0.20
2-AM-4,6-DNT	42054	0.4	1	1	105135.0	105135	103889	1.20	1.20
2,6-DNT	31583	0.4	1	1	78957.5	78958	76293	3.49	3.50
2,4-DNT	28517	0.2	1	1	142585.0	142585	138611	2.87	2.90
2-NT	22926	0.4	1	1	57315.0	57315	55913	2.51	2.50
4-NT	18057	0.4	1	1	45142.5	45143	43674	3.36	3.40
3-NT	21761	0.4	1	1	54402.5	54403	53013	2.62	2.60

CCV - continuing calibration verification
IC - initial calibration
%D - percent difference
SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 8 of 15)

Laboratory: Severn Trent
Calibration Date: 3/19/2007

SDG: 250401
Time: 0047

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	24624	0.2	1	1	123120.0	123120	123748	0.51	0.50
RDX	19145	0.2	1	1	95725.0	95725	98696	3.01	3.00
1,3,5-TNB	39694	0.2	1	1	198470.0	198470	193853	2.38	2.40
1,3-DNB	45684	0.2	1	1	228420.0	228420	223739	2.09	2.10
NB	27855	0.2	1	1	139275.0	139275	137600	1.22	1.20
TETRYL	45524	0.4	1	1	113810.0	113810	109746	3.70	3.70
2,4,6-TNT	25599	0.2	1	1	127995.0	127995	122650	4.36	4.40
4-AM2,6-DNT	31400	0.4	1	1	78500.0	78500	77355	1.48	1.50
2-AM-4,6-DNT	42318	0.4	1	1	105795.0	105796	103889	1.83	1.80
2,6-DNT	32393	0.4	1	1	80982.5	80983	76293	6.15	6.10
2,4-DNT	29100	0.2	1	1	145500.0	145500	138611	4.97	5.00
2-NT	23367	0.4	1	1	58417.5	58418	55913	4.48	4.50
4-NT	18300	0.4	1	1	45750.0	45750	43674	4.75	4.80
3-NT	22197	0.4	1	1	55492.5	55493	53013	4.68	4.70

Laboratory: Severn Trent
Calibration Date: 3/21/2007

SDG: 250418
Time: 2038

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	21569	0.2	1	1	107845.0	107845	106680	1.09	1.10
RDX	17783	0.2	1	1	88915.0	88915	87406	1.73	1.70
1,3,5-TNB	34564	0.2	1	1	172820.0	172820	168696	2.44	2.40
1,3-DNB	40994	0.2	1	1	204970.0	204970	200062	2.45	2.50
NB	26249	0.2	1	1	131245.0	131245	130178	0.82	0.80
TETRYL	38222	0.4	1	1	95555.0	95555	93429	2.28	2.30
2,4,6-TNT	21973	0.2	1	1	109865.0	109865	106851	2.82	2.80
4-AM2,6-DNT	26748	0.4	1	1	66870.0	66870	65688	1.80	1.80
2-AM-4,6-DNT	37443	0.4	1	1	93607.5	93608	91043	2.82	2.80
2,6-DNT	27191	0.4	1	1	67977.5	67978	65813	3.29	3.30
2,4-DNT	25388	0.2	1	1	126940.0	126940	122123	3.94	3.90
2-NT	20646	0.4	1	1	51615.0	51615	50555	2.10	2.10
4-NT	16932	0.4	1	1	42330.0	42330	40575	4.33	4.30
3-NT	19889	0.4	1	1	49722.5	49723	48320	2.90	2.90

Laboratory: Test America
Calibration Date: 6/9/2007

SDG: 500-4599
Time: 2337

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	42288	0.4	1	1	105720.0	105720	102354	3.29	3.30
RDX	33713	0.4	1	1	84282.5	84283	77460	8.81	8.80
1,3,5-TNB	69304	0.4	1	1	173260.0	173260	169246	2.37	2.40
1,3-DNB	80923	0.4	1	1	202307.5	202308	197877	2.24	2.20
NB	51321	0.4	1	1	128302.5	128303	126316	1.57	1.60
TETRYL	74033	0.8	1	1	92541.3	92541	94860	2.44	2.40
2,4,6-TNT	42912	0.4	1	1	107280.0	107280	111513	3.80	3.80
4-AM2,6-DNT	53752	0.8	1	1	67190.0	67190	64749	3.77	3.80
2-AM-4,6-DNT	74541	0.8	1	1	93176.3	93176	90763	2.66	2.70
2,6-DNT	54389	0.8	1	1	67986.3	67986	66365	2.44	2.40
2,4-DNT	56968	0.4	1	1	142420.0	142420	135495	5.11	5.10
2-NT	42121	0.8	1	1	52651.3	52651	51568	2.10	2.10
4-NT	33638	0.8	1	1	42047.5	42048	41179	2.11	2.10
3-NT	40115	0.8	1	1	50143.8	50144	47051	6.57	6.60

CCV - continuing calibration verification
IC - initial calibration
%D - percent difference
SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America
Calibration Date: 6/10/2007

SDG: 500-4602
Time: 0132

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	48481	0.4	1	1	121202.5	121203	120956	0.20	0.20
RDX	39899	0.4	1	1	99747.5	99748	96073	3.82	3.80
1,3,5-TNB	75683	0.4	1	1	189207.5	189208	190837	0.85	0.90
1,3-DNB	87547	0.4	1	1	218867.5	218868	221574	1.22	1.20
NB	53201	0.4	1	1	133002.5	133003	135513	1.85	1.90
TETRYL	84190	0.8	1	1	105237.5	105238	104111	1.08	1.10
2,4,6-TNT	47273	0.4	1	1	118182.5	118183	119912	1.44	1.40
4-AM2,6-DNT	59511	0.8	1	1	74388.8	74389	75774	1.83	1.80
2-AM-4,6-DNT	81071	0.8	1	1	101338.8	101339	101380	0.04	0.00
2,6-DNT	59714	0.8	1	1	74642.5	74643	74694	0.07	0.10
2,4-DNT	54085	0.4	1	1	135212.5	135213	136437	0.90	0.90
2-NT	43218	0.8	1	1	54022.5	54023	54553	0.97	1.00
4-NT	33770	0.8	1	1	42212.5	42213	42815	1.41	1.40
3-NT	40370	0.8	1	1	50462.5	50463	51205	1.45	1.40

Laboratory: Test America
Calibration Date: 6/13/2007

SDG: 500-4661
Time: 1842

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	46366	0.4	1	1	115915.0	115915	120956	4.17	4.20
RDX	37387	0.4	1	1	93467.5	93468	96073	2.71	2.70
1,3,5-TNB	72207	0.4	1	1	180517.5	180518	190837	5.41	5.40
1,3-DNB	83686	0.4	1	1	209215.0	209215	221574	5.58	5.60
NB	50880	0.4	1	1	127200.0	127200	135513	6.13	6.10
TETRYL	80041	0.8	1	1	100051.3	100051	104111	3.90	3.90
2,4,6-TNT	44922	0.4	1	1	112305.0	112305	119912	6.34	6.30
4-AM2,6-DNT	56140	0.8	1	1	70175.0	70175	75774	7.39	7.40
2-AM-4,6-DNT	76458	0.8	1	1	95572.5	95573	101380	5.73	5.70
2,6-DNT	57320	0.8	1	1	71650.0	71650	74694	4.08	4.10
2,4-DNT	51602	0.4	1	1	129005.0	129005	136737	5.65	5.40
2-NT	41057	0.8	1	1	51321.3	51321	54553	5.92	5.90
4-NT	32330	0.8	1	1	40412.5	40413	42815	5.61	5.60
3-NT	38626	0.8	1	1	48282.5	48283	51205	5.71	5.70

Laboratory: Test America
Calibration Date: 6/13/2007

SDG: 500-4662
Time: 1842

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	41782	0.4	1	1	104455.0	104455	102354	2.05	2.10
RDX	33547	0.4	1	1	83867.5	83868	77460	8.27	8.30
1,3,5-TNB	68010	0.4	1	1	170025.0	170025	169246	0.46	0.50
1,3-DNB	79821	0.4	1	1	199552.5	199553	197877	0.85	0.80
NB	50771	0.4	1	1	126927.5	126928	126316	0.48	0.50
TETRYL	76620	0.8	1	1	95775.0	95775	94860	0.96	1.00
2,4,6-TNT	44508	0.4	1	1	111270.0	111270	111513	0.22	0.20
4-AM2,6-DNT	52797	0.8	1	1	65996.3	65996	64749	1.93	1.90
2-AM-4,6-DNT	74170	0.8	1	1	92712.5	92713	90763	2.15	2.10
2,6-DNT	53743	0.8	1	1	67178.8	67179	66365	1.23	1.20
2,4-DNT	56238	0.4	1	1	140595.0	140595	135495	3.76	3.80
2-NT	41115	0.8	1	1	51393.8	51394	51568	0.34	0.30
4-NT	32908	0.8	1	1	41135.0	41135	41179	0.11	0.10
3-NT	39056	0.8	1	1	48820.0	48820	47051	3.76	3.80

CCV - continuing calibration verification
IC - initial calibration
%D - percent difference
SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America
Calibration Date: 7/21/2007

SDG: 500-5427
Time: 2318

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	19152	0.2	1	1	95760.0	95760	102354	6.44	6.40
RDX	14660	0.2	1	1	73300.0	73300	77460	5.37	5.40
1,3,5-TNB	32608	0.2	1	1	163040.0	163040	169246	3.67	3.70
1,3-DNB	38367	0.2	1	1	191835.0	191835	197877	3.05	3.10
NB	24687	0.2	1	1	123435.0	123435	126316	2.28	2.30
TETRYL	37543	0.4	1	1	93857.5	93858	94860	1.06	1.10
2,4,6-TNT	21857	0.2	1	1	109285.0	109285	111513	2.00	2.00
4-AM2,6-DNT	24814	0.4	1	1	62035.0	62035	64749	4.19	4.20
2-AM-4,6-DNT	34989	0.4	1	1	87472.5	87473	90763	3.63	3.60
2,6-DNT	26434	0.4	1	1	66085.0	66085	66365	0.42	0.40
2,4-DNT	28624	0.2	1	1	143120.0	143120	135495	5.63	5.60
2-NT	20562	0.4	1	1	51405.0	51405	51568	0.32	0.30
4-NT	16513	0.4	1	1	41282.5	41583	41179	0.25	0.30
3-NT	19623	0.4	1	1	49057.5	49058	47051	4.26	4.30

Laboratory: Test America
Calibration Date: 8/3/2007

SDG: 500-5635
Time: 0112

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	40088	0.4	1	1	100220.0	100220	102354	2.08	2.08
RDX	31733	0.4	1	1	79332.5	79333	77460	2.42	2.42
1,3,5-TNB	67159	0.4	1	1	167897.5	167898	169246	0.80	0.80
1,3-DNB	78513	0.4	1	1	196282.5	196283	197877	0.81	0.81
NB	50387	0.4	1	1	125967.5	125968	126316	0.28	0.28
TETRYL	76659	0.8	1	1	95823.8	95824	94860	1.02	1.02
2,4,6-TNT	44090	0.4	1	1	110225.0	110225	111513	1.16	1.16
4-AM2,6-DNT	52259	0.8	1	1	65323.8	65324	64749	0.89	0.89
2-AM-4,6-DNT	73624	0.8	1	1	92030.0	92030	90763	1.40	1.40
2,6-DNT	53864	0.8	1	1	67330.0	67330	66365	1.45	1.45
2,4-DNT	57250	0.4	1	1	143125.0	143125	135495	5.63	5.63
2-NT	42245	0.8	1	1	52806.3	52806	51568	2.40	2.40
4-NT	34256	0.8	1	1	42820.0	42820	41179	3.99	3.98
3-NT	40717	0.8	1	1	50896.3	50896	47051	8.17	8.17

Laboratory: Test America
Calibration Date: 8/4/2007

SDG: 500-5681
Time: 1701

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	52637	0.4	1	1	131592.5	131593	128781	2.18	2.18
RDX	42621	0.4	1	1	106552.5	106553	106644	0.09	0.09
1,3,5-TNB	83416	0.4	1	1	208540.0	208540	204442	2.00	2.00
1,3-DNB	96189	0.4	1	1	240472.5	240473	236660	1.61	1.61
NB	58527	0.4	1	1	146317.5	146318	143548	1.93	1.93
TETRYL	98272	0.8	1	1	122840.0	122840	120869	1.63	1.63
2,4,6-TNT	54285	0.4	1	1	135712.5	135713	133520	1.64	1.64
4-AM2,6-DNT	67232	0.8	1	1	84040.0	84040	83151	1.07	1.07
2-AM-4,6-DNT	91456	0.8	1	1	114320.0	114320	113127	1.05	1.05
2,6-DNT	66951	0.8	1	1	83688.8	83689	82591	1.33	1.33
2,4-DNT	61555	0.4	1	1	153887.5	153888	152443	0.95	0.95
2-NT	49529	0.8	1	1	61911.3	61911	60359	2.57	2.57
4-NT	38859	0.8	1	1	48573.8	48574	47804	1.61	1.61
3-NT	46720	0.8	1	1	58400.0	58400	57290	1.94	1.94

CCV - continuing calibration verification
IC - initial calibration
%D - percent difference
SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America
Calibration Date: 8/4/2007

SDG: 500-5718
Time: 0112

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	40266	0.4	1	1	100665.0	100665	102354	1.65	1.65
RDX	33194	0.4	1	1	82985.0	82985	77460	7.13	7.13
1,3,5-TNB	66027	0.4	1	1	165067.5	165068	169246	2.47	2.47
1,3-DNB	77901	0.4	1	1	194752.5	194753	197877	1.58	1.58
NB	49519	0.4	1	1	123797.5	123798	126316	1.99	1.99
TETRYL	72209	0.8	1	1	90261.3	90261	94860	4.85	4.85
2,4,6-TNT	42097	0.4	1	1	105242.5	105243	111513	5.62	5.62
4-AM2,6-DNT	52090	0.8	1	1	65112.5	65113	64749	0.56	0.56
2-AM-4,6-DNT	73604	0.8	1	1	92005.0	92005	90763	1.37	1.37
2,6-DNT	52541	0.8	1	1	65676.3	65676	66365	1.04	1.04
2,4-DNT	55799	0.4	1	1	139497.5	139498	135495	2.95	2.95
2-NT	41793	0.8	1	1	52241.3	52241	51568	1.31	1.31
4-NT	33873	0.8	1	1	42341.3	42341	41135	2.93	2.82
3-NT	40523	0.8	1	1	50653.8	50654	47051	7.66	7.66

Laboratory: Test America
Calibration Date: 8/4/2007

SDG: 500-5719
Time: 0500

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	20309	0.2	1	1	101545.0	101545	102354	0.79	0.79
RDX	16097	0.2	1	1	80485.0	80485	77460	3.91	3.90
1,3,5-TNB	33757	0.2	1	1	168785.0	168785	169246	0.27	0.27
1,3-DNB	39597	0.2	1	1	197985.0	197985	197877	0.05	0.05
NB	25410	0.2	1	1	127050.0	127050	126316	0.58	0.58
TETRYL	38927	0.4	1	1	97317.5	97318	94860	2.59	2.59
2,4,6-TNT	22555	0.2	1	1	112775.0	112775	111513	1.13	1.13
4-AM2,6-DNT	26297	0.4	1	1	65742.5	65743	64749	1.53	1.53
2-AM-4,6-DNT	37074	0.4	1	1	92685.0	92685	90763	2.12	2.12
2,6-DNT	26871	0.4	1	1	67177.5	67178	66365	1.22	1.22
2,4-DNT	28523	0.2	1	1	142615.0	142615	135495	5.25	5.25
2-NT	21020	0.4	1	1	52550.0	52550	51568	1.90	1.90
4-NT	17111	0.4	1	1	42777.5	42778	41135	3.99	3.88
3-NT	20015	0.4	1	1	50037.5	50038	47051	6.35	6.35

Laboratory: Test America
Calibration Date: 8/4/2007

SDG: 500-5720
Time: 0500

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	20309	0.2	1	1	101545.0	101545	102354	0.79	0.79
RDX	16097	0.2	1	1	80485.0	80485	77460	3.91	3.90
1,3,5-TNB	33757	0.2	1	1	168785.0	168785	169246	0.27	0.27
1,3-DNB	39597	0.2	1	1	197985.0	197985	197877	0.05	0.05
NB	25410	0.2	1	1	127050.0	127050	126316	0.58	0.58
TETRYL	38927	0.4	1	1	97317.5	97318	94860	2.59	2.59
2,4,6-TNT	22555	0.2	1	1	112775.0	112775	111513	1.13	1.13
4-AM2,6-DNT	26297	0.4	1	1	65742.5	65743	64749	1.53	1.53
2-AM-4,6-DNT	37074	0.4	1	1	92685.0	92685	90763	2.12	2.12
2,6-DNT	26871	0.4	1	1	67177.5	67178	66365	1.22	1.22
2,4-DNT	28523	0.2	1	1	142615.0	142615	135495	5.25	5.25
2-NT	21020	0.4	1	1	52550.0	52550	51568	1.90	1.90
4-NT	17111	0.4	1	1	42777.5	42778	41135	3.99	3.88
3-NT	20015	0.4	1	1	50037.5	50038	47051	6.35	6.35

CCV - continuing calibration verification
IC - initial calibration
%D - percent difference
SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America
Calibration Date: 8/27/2007

SDG: 500-6088
Time: 2338

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	20791	0.2	1	1	103955.0	103955	105019	1.01	1.01
RDX	16959	0.2	1	1	84795.0	84795	84246	0.65	0.65
1,3,5-TNB	34060	0.2	1	1	170300.0	170300	166488	2.29	2.31
1,3-DNB	40206	0.2	1	1	201030.0	201030	197409	1.83	1.83
NB	26094	0.2	1	1	130470.0	130470	129463	0.78	0.78
TETRYL	39292	0.4	1	1	98230.0	98230	92813	5.84	5.84
2,4,6-TNT	22283	0.2	1	1	111415.0	111415	107882	3.27	3.27
4-AM2,6-DNT	26876	0.4	1	1	67190.0	67190	66542	0.97	0.97
2-AM-4,6-DNT	37512	0.4	1	1	93780.0	93780	91657	2.32	2.32
2,6-DNT	27266	0.4	1	1	68165.0	68165	66022	3.25	3.25
2,4-DNT	27010	0.2	1	1	135050.0	135050	128155	5.38	5.38
2-NT	21564	0.4	1	1	53910.0	53910	52400	2.88	2.88
4-NT	17626	0.4	1	1	44065.0	44065	42467	3.76	3.76
3-NT	20537	0.4	1	1	51342.5	51343	48519	5.82	5.82

Laboratory: Test America
Calibration Date: 8/27/2007

SDG: 500-6089
Time: 2338

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	20791	0.2	1	1	103955.0	103955	105019	1.01	1.01
RDX	16959	0.2	1	1	84795.0	84795	84246	0.65	0.65
1,3,5-TNB	34060	0.2	1	1	170300.0	170300	166488	2.29	2.31
1,3-DNB	40206	0.2	1	1	201030.0	201030	197409	1.83	1.83
NB	26094	0.2	1	1	130470.0	130470	129463	0.78	0.78
TETRYL	39292	0.4	1	1	98230.0	98230	92813	5.84	5.84
2,4,6-TNT	22283	0.2	1	1	111415.0	111415	107882	3.27	3.27
4-AM2,6-DNT	26876	0.4	1	1	67190.0	67190	66542	0.97	0.97
2-AM-4,6-DNT	37512	0.4	1	1	93780.0	93780	91657	2.32	2.32
2,6-DNT	27266	0.4	1	1	68165.0	68165	66022	3.25	3.25
2,4-DNT	27010	0.2	1	1	135050.0	135050	128155	5.38	5.38
2-NT	21564	0.4	1	1	53910.0	53910	52400	2.88	2.88
4-NT	17626	0.4	1	1	44065.0	44065	42467	3.76	3.76
3-NT	20537	0.4	1	1	51342.5	51343	48519	5.82	5.82

Laboratory: Test America
Calibration Date: 9/21/2007

SDG: 500-6650
Time: 1927

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	40675	0.4	1	1	101687.5	101688	105019	3.17	3.17
RDX	33644	0.4	1	1	84110.0	84110	84246	0.16	0.16
1,3,5-TNB	67157	0.4	1	1	167892.5	167893	166448	0.87	0.87
1,3-DNB	79605	0.4	1	1	199012.5	199013	197409	0.81	0.81
NB	51406	0.4	1	1	128515.0	128515	129463	0.73	0.73
TETRYL	75892	0.8	1	1	94865.0	94865	92813	2.21	2.21
2,4,6-TNT	43065	0.4	1	1	107662.5	107663	107882	0.20	0.20
4-AM2,6-DNT	54220	0.8	1	1	67775.0	67775	66542	1.85	1.85
2-AM-4,6-DNT	75150	0.8	1	1	93937.5	93938	91657	2.49	2.49
2,6-DNT	54298	0.8	1	1	67872.5	67873	66022	2.80	2.80
2,4-DNT	53779	0.4	1	1	134447.5	134448	128155	4.91	4.91
2-NT	42359	0.8	1	1	52948.8	52949	52400	1.05	1.05
4-NT	34239	0.8	1	1	42798.8	42799	42467	0.78	0.78
3-NT	40414	0.8	1	1	50517.5	50518	48519	4.12	4.12

CCV - continuing calibration verification
IC - initial calibration
%D - percent difference
SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America
Calibration Date: 9/22/2007

SDG: 500-6651
Time: 0759

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	40106	0.4	1	1	100265.0	100265	105019	4.53	4.53
RDX	32946	0.4	1	1	82365.0	82365	84246	2.23	2.23
1,3,5-TNB	66771	0.4	1	1	166927.5	166928	166448	0.29	0.29
1,3-DNB	79315	0.4	1	1	198287.5	198288	197409	0.45	0.44
NB	51842	0.4	1	1	129605.0	129605	129463	0.11	0.11
TETRYL	75905	0.8	1	1	94881.3	94881	92813	2.23	2.23
2,4,6-TNT	43309	0.4	1	1	108272.5	108273	107882	0.36	0.36
4-AM2,6-DNT	54396	0.8	1	1	67995.0	67995	66542	2.18	2.18
2-AM-4,6-DNT	75137	0.8	1	1	93921.3	93921	91657	2.47	2.47
2,6-DNT	54739	0.8	1	1	68423.8	68424	66022	3.64	3.64
2,4-DNT	54052	0.4	1	1	135130.0	135130	128155	5.44	5.44
2-NT	43113	0.8	1	1	53891.3	53891	52400	2.85	2.85
4-NT	34837	0.8	1	1	43546.3	43546	42467	2.54	2.54
3-NT	41255	0.8	1	1	51568.8	51569	48519	6.29	6.29

Laboratory: Test America
Calibration Date: 9/25/2007

SDG: 500-6713
Time: 2016

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	42955	0.4	1	1	107387.5	107388	105019	2.26	2.26
RDX	35374	0.4	1	1	88435.0	88435	84246	4.97	4.97
1,3,5-TNB	71856	0.4	1	1	179640.0	179640	166448	7.93	7.93
1,3-DNB	84028	0.4	1	1	210070.0	210070	197409	6.41	6.41
NB	53185	0.4	1	1	132962.5	132963	129463	2.70	2.70
TETRYL	83205	0.8	1	1	104006.3	104006	92813	12.06	12.06
2,4,6-TNT	46609	0.4	1	1	116522.5	116523	107882	8.01	8.01
4-AM2,6-DNT	56911	0.8	1	1	71138.8	71139	66542	6.91	6.91
2-AM-4,6-DNT	78454	0.8	1	1	98067.5	98068	91657	6.99	6.99
2,6-DNT	57549	0.8	1	1	71936.3	71936	66022	8.96	8.96
2,4-DNT	56214	0.4	1	1	140535.0	140535	128155	9.66	9.66
2-NT	44492	0.8	1	1	55615.0	55615	52400	6.14	6.13
4-NT	35215	0.8	1	1	44018.8	44019	42467	3.65	3.65
3-NT	42082	0.8	1	1	52602.5	52603	48519	8.42	8.42

Laboratory: Test America
Calibration Date: 9/25/2007

SDG: 500-6714
Time: 2016

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	42955	0.4	1	1	107387.5	107388	105019	2.26	2.26
RDX	35374	0.4	1	1	88435.0	88435	84246	4.97	4.97
1,3,5-TNB	71856	0.4	1	1	179640.0	179640	166448	7.93	7.93
1,3-DNB	84028	0.4	1	1	210070.0	210070	197409	6.41	6.41
NB	53185	0.4	1	1	132962.5	132963	129463	2.70	2.70
TETRYL	83205	0.8	1	1	104006.3	104006	92813	12.06	12.06
2,4,6-TNT	46609	0.4	1	1	116522.5	116523	107882	8.01	8.01
4-AM2,6-DNT	56911	0.8	1	1	71138.8	71139	66542	6.91	6.91
2-AM-4,6-DNT	78454	0.8	1	1	98067.5	98068	91657	6.99	6.99
2,6-DNT	57549	0.8	1	1	71936.3	71936	66022	8.96	8.96
2,4-DNT	56214	0.4	1	1	140535.0	140535	128155	9.66	9.66
2-NT	44492	0.8	1	1	55615.0	55615	52400	6.14	6.13
4-NT	35215	0.8	1	1	44018.8	44019	42467	3.65	3.65
3-NT	42082	0.8	1	1	52602.5	52603	48519	8.42	8.42

CCV - continuing calibration verification
IC - initial calibration
%D - percent difference
SDG - sample delivery group

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America
Calibration Date: 10/3/2007

SDG: 500-6900
Time: 0538

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	20943	0.2	1	1	104715.0	104715	108746	3.71	3.71
RDX	17146	0.2	1	1	85730.0	85730	87487	2.01	2.01
1,3,5-TNB	33970	0.2	1	1	169850.0	169850	176752	3.90	3.91
1,3-DNB	40068	0.2	1	1	200340.0	200340	209328	4.29	4.29
NB	25218	0.2	1	1	126090.0	126090	132722	5.00	5.00
TETRYL	38426	0.4	1	1	96065.0	96065	100905	4.80	4.80
2,4,6-TNT	21868	0.2	1	1	109340.0	109340	115641	5.45	5.45
4-AM2,6-DNT	27158	0.4	1	1	67895.0	67895	71253	4.71	4.71
2-AM-4,6-DNT	37250	0.4	1	1	93125.0	93125	97291	4.28	4.28
2,6-DNT	27284	0.4	1	1	68210.0	68210	71272	4.30	4.30
2,4-DNT	26360	0.2	1	1	131800.0	131800	135466	2.71	2.71
2-NT	20855	0.4	1	1	52137.5	52138	54437	4.22	4.22
4-NT	16380	0.4	1	1	40950.0	40950	43473	5.80	5.80
3-NT	19546	0.4	1	1	48865.0	48865	51403	4.94	4.94

Laboratory: Test America
Calibration Date: 10/10/2007

SDG: 500-7026
Time: 2012

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	43202	0.4	1	1	108005.0	108005	108746	0.68	0.68
RDX	35892	0.4	1	1	89730.0	89730	87487	2.56	2.56
1,3,5-TNB	69709	0.4	1	1	174272.5	101968	176752	1.40	1.40
1,3-DNB	81785	0.4	1	1	204462.5	204463	209328	2.32	2.32
NB	51493	0.4	1	1	128732.5	128733	132722	3.01	3.01
TETRYL	79249	0.8	1	1	99061.3	99061	100905	1.83	1.83
2,4,6-TNT	44603	0.4	1	1	111507.5	111508	115641	3.57	3.57
4-AM2,6-DNT	55433	0.8	1	1	69291.3	69291	71253	2.75	2.75
2-AM-4,6-DNT	76434	0.8	1	1	95542.5	95543	97291	1.80	1.80
2,6-DNT	55391	0.8	1	1	69238.8	69239	71272	2.85	2.85
2,4-DNT	53781	0.4	1	1	134452.5	134453	135466	0.75	0.75
2-NT	42178	0.8	1	1	52722.5	52723	54437	3.15	3.15
4-NT	33639	0.8	1	1	42048.8	42049	43473	3.28	3.28
3-NT	40066	0.8	1	1	50082.5	50083	51403	2.57	2.57

Laboratory: Test America
Calibration Date: 10/11/2007

SDG: 500-7047
Time: 0640

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	42879	0.4	1	1	107197.5	107198	108746	1.42	1.42
RDX	34507	0.4	1	1	86267.5	86268	87487	1.39	1.39
1,3,5-TNB	69964	0.4	1	1	174910.0	174910	176752	1.04	1.04
1,3-DNB	81804	0.4	1	1	204510.0	204510	209328	2.30	2.30
NB	52293	0.4	1	1	130732.5	130733	132722	1.50	1.50
TETRYL	81006	0.8	1	1	101257.5	101258	100905	0.35	0.35
2,4,6-TNT	45980	0.4	1	1	114950.0	114950	115641	0.60	0.60
4-AM2,6-DNT	55903	0.8	1	1	69878.8	69879	71253	1.93	1.93
2-AM-4,6-DNT	76980	0.8	1	1	96225.0	96225	97291	1.10	1.10
2,6-DNT	56893	0.8	1	1	71116.3	71116	71272	0.22	0.22
2,4-DNT	55496	0.4	1	1	138740.0	138740	135466	2.42	2.42
2-NT	43617	0.8	1	1	54521.3	54521	54437	0.15	0.15
4-NT	34917	0.8	1	1	43646.3	43646	43473	0.40	0.40
3-NT	41602	0.8	1	1	52002.5	52003	51403	1.17	1.17

Table E-2

Explosives
Continuing Calibration Calculation Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America
Calibration Date: 10/16/2007

SDG: 500-7048
Time: 1006

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	21834	0.2	1	1	109170.0	109170	105019	3.95	3.95
RDX	17576	0.2	1	1	87880.0	87880	84246	4.31	4.31
1,3,5-TNB	35469	0.2	1	1	177345.0	177345	166448	6.55	6.55
1,3-DNB	41482	0.2	1	1	207410.0	207410	197409	5.07	5.07
NB	26228	0.2	1	1	131140.0	131140	129463	1.30	1.30
TETRYL	40623	0.4	1	1	101557.5	101558	92813	9.42	9.42
2,4,6-TNT	22938	0.2	1	1	114690.0	114690	107882	6.31	6.31
4-AM2,6-DNT	27888	0.4	1	1	69720.0	69720	66542	4.78	4.78
2-AM-4,6-DNT	38705	0.4	1	1	96762.5	96763	91657	5.57	5.57
2,6-DNT	28327	0.4	1	1	70817.5	70818	66022	7.26	7.26
2,4-DNT	27633	0.2	1	1	138165.0	138165	128155	7.81	7.81
2-NT	21688	0.4	1	1	54220.0	54220	52400	3.47	3.47
4-NT	17419	0.4	1	1	43547.5	43548	42467	2.54	2.54
3-NT	20757	0.4	1	1	51892.5	51893	48519	6.95	6.95

Laboratory: Test America
Calibration Date: 10/18/2007

SDG: 500-7145
Time: 1946

CF = Peak Area (or Height)/mass injected (ng) mass injected (ng) = calibration std (ug/ml) *conversion * amount injected (ul)

Compound	Peak Height	Cal. Std.	Conv	Injected amount	Recalculated CCV CF	Reported CCV CF	IC CF	Recalculated %D	Reported %D
HMX	42444	0.4	1	1	106110.0	106110	105019	1.04	1.04
RDX	34807	0.4	1	1	87017.5	87018	84246	3.29	3.29
1,3,5-TNB	68734	0.4	1	1	171835.0	171835	166448	3.24	3.24
1,3-DNB	81379	0.4	1	1	203447.5	203448	197409	3.06	3.06
NB	51579	0.4	1	1	128947.5	128948	129463	0.40	0.40
TETRYL	72592	0.8	1	1	90740.0	90740	92813	2.23	2.23
2,4,6-TNT	40760	0.4	1	1	101900.0	101900	107882	5.54	5.54
4-AM2,6-DNT	57416	0.8	1	1	71770.0	71770	66542	7.86	7.86
2-AM-4,6-DNT	76142	0.8	1	1	95177.5	95178	91657	3.84	3.84
2,6-DNT	55652	0.8	1	1	69565.0	69565	66022	5.37	5.37
2,4-DNT	54206	0.4	1	1	135515.0	135515	128155	5.74	5.74
2-NT	42692	0.8	1	1	53365.0	53365	52400	1.84	1.84
4-NT	34323	0.8	1	1	42903.8	42904	42467	1.03	1.03
3-NT	41095	0.8	1	1	51368.8	51369	48519	5.87	5.87

Table E-3

Explosives
Surrogate Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 5)

Laboratory: Severn Trent/Test America

SDG: Various - see table

Percent recovery (%R) = SF/SS x 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample Identification:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF46(2)	247884	1,2-dinitrobenzene	0.20	0.21604	108.0	108	Y
JPM3-ITF-AF47(2)	247884	1,2-dinitrobenzene	0.20	0.21980	109.9	110	Y
JPM3-ITF-AF48(2)	247884	1,2-dinitrobenzene	0.20	0.22823	114.1	114	Y
JPM3-ITF-AF49(2)	247884	1,2-dinitrobenzene	0.20	0.21370	106.9	107	Y
JPM3-ITF-AF51(2)	247884	1,2-dinitrobenzene	0.20	0.21905	109.5	110	Y
JPM3-ITF-AF52(2)	247884	1,2-dinitrobenzene	0.20	0.20474	102.4	102	Y
JPM3-ITF-AF53(2)	247884	1,2-dinitrobenzene	0.20	0.21414	107.1	107	Y
JPM3-ITF-AF54(2)	247884	1,2-dinitrobenzene	0.20	0.21881	109.4	109	Y
JPM3-ITF-AF55(2)	247884	1,2-dinitrobenzene	0.20	0.21503	107.5	108	Y
JPM3-ITF-AF193(2)	249025	1,2-dinitrobenzene	0.20	0.20319	101.6	102	Y
JPM3-CP7-16	249144	1,2-dinitrobenzene	0.20	0.19975	99.9	100	Y
JPM3-CP7-17	249144	1,2-dinitrobenzene	0.20	0.20569	102.8	103	Y
JPM3-CP7-18	249144	1,2-dinitrobenzene	0.20	0.24011	120.1	120	Y
JPM3-CP7-19	249144	1,2-dinitrobenzene	0.20	0.23192	116.0	116	Y
JPM3-CP7-20	249144	1,2-dinitrobenzene	0.20	0.24105	120.5	121	Y
JPM3-CP7-21	249144	1,2-dinitrobenzene	0.20	0.20255	101.3	101	Y
JPM3-CP7-22	249144	1,2-dinitrobenzene	0.20	0.21561	107.8	108	Y
JPM3-CP7-23	249144	1,2-dinitrobenzene	0.20	0.21144	105.7	106	Y
JPM3-CP7-18	249183	1,2-dinitrobenzene	0.18	0.16807	92.4	92	Y
JPM3ITFCP1-4(1)	249398	1,2-dinitrobenzene	0.20	0.19198	96.0	96	Y
JPM3ITFCP1-5(1)	249398	1,2-dinitrobenzene	0.20	0.19030	95.2	95	Y
JPM3ITFCP1-6(1)	249398	1,2-dinitrobenzene	0.20	0.19820	99.1	99	Y
JPM3ITFCP1-7(1)	249398	1,2-dinitrobenzene	0.20	0.20251	101.3	101	Y
JPM3ITFCP1-8(1)	249398	1,2-dinitrobenzene	0.20	0.20614	103.1	103	Y
JPM3ITFCP1-9(1)	249398	1,2-dinitrobenzene	0.20	0.22816	114.1	114	Y
JPM3ITFCP1-16(1)	249398	1,2-dinitrobenzene	0.20	0.22576	112.9	113	Y
JPM3ITFCP1-17(1)	249398	1,2-dinitrobenzene	0.20	0.17897	89.5	89	Y
JPM3ITFCP1-18(1)	249398	1,2-dinitrobenzene	0.20	0.20301	101.5	102	Y
JPM3-ITF-CP1-18(1)	249477	1,2-dinitrobenzene	0.20	0.22427	112.1	112	Y
JPL2-ASH	249602	1,2-dinitrobenzene	0.20	0.20557	102.8	103	Y
JPL2-CP31(1)	249603	1,2-dinitrobenzene	0.20	0.20990	105.0	105	Y
JPL2-CP37(1)	249603	1,2-dinitrobenzene	0.20	0.20702	103.5	104	Y
JPL2-CP38(1)	249603	1,2-dinitrobenzene	0.20	0.20353	101.8	102	Y
JPL2-CP39(1)	249603	1,2-dinitrobenzene	0.20	0.11840	59.2	59	Y
JPL2-CP41(1)	249603	1,2-dinitrobenzene	0.20	0.19375	96.9	97	Y
JPL2-CP42(1)	249603	1,2-dinitrobenzene	0.20	0.11360	56.8	57	Y
JPL2-CP43(1)	249603	1,2-dinitrobenzene	0.20	0.20045	100.2	100	Y
JPM3-LEAD A 21 DE LAGOON E	249776	1,2-dinitrobenzene	0.20	0.20105	100.5	101	Y
JPM3-ITF-AP98(1)	249944	1,2-dinitrobenzene	0.20	0.20489	102.4	102	Y
JPM3-ITF-AP99(1)	249944	1,2-dinitrobenzene	0.20	0.20664	103.3	103	Y
JPM3-ITF-AF249(3)	249944	1,2-dinitrobenzene	0.20	0.20430	102.2	102	Y
JPM3-ITF-AF250(3)	249944	1,2-dinitrobenzene	0.20	0.20968	104.8	105	Y
JPM3-ITF-AF251(3)	249944	1,2-dinitrobenzene	0.20	0.20495	102.5	102	Y
JPM3-ITF-AF252(3)	249944	1,2-dinitrobenzene	0.20	0.20576	102.9	103	Y
JPM3-ITF-AF253(3)	249944	1,2-dinitrobenzene	0.20	0.20808	104.0	104	Y
JPM3-ITF-AF254(3)	249944	1,2-dinitrobenzene	0.20	0.21436	107.2	107	Y
JPL5-L1(1)	250012	1,2-dinitrobenzene	0.20	0.20611	103.1	103	Y
JPL5-L2(1)	250012	1,2-dinitrobenzene	0.20	0.21244	106.2	106	Y
JPL5-L3(1)	250012	1,2-dinitrobenzene	0.20	0.20466	102.3	102	Y
JPL5-L4(1)	250012	1,2-dinitrobenzene	0.20	0.24606	123.0	123	Y
JPL5-L5(1)	250012	1,2-dinitrobenzene	0.20	0.20081	100.4	100	Y
JPM3-ITF-AP255(2)	250165	1,2-dinitrobenzene	0.20	0.20423	102.1	102	Y
JPM3-ITF-AP256(2)	250165	1,2-dinitrobenzene	0.20	0.20668	103.3	103	Y
JPM3-ITF-AF49B(1)	250224	1,2-dinitrobenzene	0.20	0.19252	96.3	96	Y

D - surrogate diluted out
SDG - sample delivery group

Table E-3

Explosives
Surrogate Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 5)

Laboratory: Severn Trent/Test America

SDG: Various - see table

Percent recovery (%R) = SF/SS x 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample Identification:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF227B(1)	250224	1,2-dinitrobenzene	0.20	0.20469	102.3	102	Y
JPL2-AP35(1)	250253	1,2-dinitrobenzene	0.20	0.20606	103.0	103	Y
JPL2-AF29(2)	250253	1,2-dinitrobenzene	0.20	0.20895	104.5	104	Y
JPL2-AP36(0.5)	250253	1,2-dinitrobenzene	0.20	0.21097	105.5	105	Y
JPL2-AP37(0.5)	250253	1,2-dinitrobenzene	0.20	0.21840	109.2	109	Y
JPL2-AP38(0.5)	250253	1,2-dinitrobenzene	0.20	0.20272	101.4	101	Y
JPL2-AP39(0.5)	250253	1,2-dinitrobenzene	0.20	0.22117	110.6	111	Y
JPL2-AF30(1)	250253	1,2-dinitrobenzene	0.20	0.22858	114.3	114	Y
JPL2-AP40(0.5)	250253	1,2-dinitrobenzene	0.20	0.22828	114.1	114	Y
JPL2-AP41(0.5)	250253	1,2-dinitrobenzene	0.20	0.22918	114.6	115	Y
JPL2-AP42(0.5)	250253	1,2-dinitrobenzene	0.20	0.23012	115.1	115	Y
JPL2-AP43(0.5)	250253	1,2-dinitrobenzene	0.20	0.21877	109.4	109	Y
JPL2-AF31(1)	250253	1,2-dinitrobenzene	0.20	0.22425	112.1	112	Y
JPL2-AP45(0.5)	250253	1,2-dinitrobenzene	0.20	0.21822	109.1	109	Y
JPL2-AP46(0.5)	250253	1,2-dinitrobenzene	0.20	0.19879	99.4	99	Y
JPL2-AP47(0.5)	250253	1,2-dinitrobenzene	0.20	0.21675	108.4	108	Y
JPL2-AF32(1)	250253	1,2-dinitrobenzene	0.20	0.21999	110.0	110	Y
JPL2-AP48(0.5)	250253	1,2-dinitrobenzene	0.20	0.22642	113.2	113	Y
JPL2-AP49(0.5)	250253	1,2-dinitrobenzene	0.20	0.21131	105.7	106	Y
JPL2-AP51(0.5)	250253	1,2-dinitrobenzene	0.20	0.21075	105.4	105	Y
JPL2-AF33(1)	250253	1,2-dinitrobenzene	0.20	0.21528	107.6	108	Y
JPL2-CP61(2)	250253	1,2-dinitrobenzene	0.20	0.21531	107.7	108	Y
JPL2-CP62(2)	250253	1,2-dinitrobenzene	0.20	0.21717	108.6	109	Y
JPL2-CP63(2)	250253	1,2-dinitrobenzene	0.20	0.21445	107.2	107	Y
JPL2-CP64(2)	250253	1,2-dinitrobenzene	0.20	0.21181	105.9	106	Y
JPL2-CP65(2)	250253	1,2-dinitrobenzene	0.20	0.21595	108.0	108	Y
JPL2-CP66(2)	250253	1,2-dinitrobenzene	0.20	0.20948	104.7	105	Y
JPL2-CP67(2)	250253	1,2-dinitrobenzene	0.20	0.20323	101.6	102	Y
JPL2-CP68(2)	250253	1,2-dinitrobenzene	0.20	0.20964	104.8	105	Y
JPL2-CP69(8)	250253	1,2-dinitrobenzene	0.20	0.20236	101.2	101	Y
JPL2-CP70(8)	250253	1,2-dinitrobenzene	0.20	0.21390	107.0	107	Y
JPL2-CP71(8)	250253	1,2-dinitrobenzene	0.20	0.20352	101.8	102	Y
JPL2-CP72(8)	250253	1,2-dinitrobenzene	0.20	0.20591	103.0	103	Y
JPL2-AP52(0.5)	250253	1,2-dinitrobenzene	0.20	0.21259	106.3	106	Y
JPL2-AP22(1)	250262	1,2-dinitrobenzene	0.20	0.20155	100.8	101	Y
JPL2-AP23(1)	250262	1,2-dinitrobenzene	0.20	0.20445	102.2	102	Y
JPL2-AF19(2)	250262	1,2-dinitrobenzene	0.20	0.19877	99.4	99	Y
JPL2-AF20(2)	250262	1,2-dinitrobenzene	0.20	0.20653	103.3	103	Y
JPL2-AF25(2)	250262	1,2-dinitrobenzene	0.20	0.19778	98.9	99	Y
JPL2-AP34(1)	250262	1,2-dinitrobenzene	0.20	0.21016	105.1	105	Y
JPL2-AF28(2)	250262	1,2-dinitrobenzene	0.20	0.20181	100.9	101	Y
JPL2-CP73(0.5)	250274	1,2-dinitrobenzene	0.20	0.22431	112.2	112	Y
JPL2-CP74(0.5)	250274	1,2-dinitrobenzene	0.20	0.22702	113.5	114	Y
JPL2-CP75(0.5)	250274	1,2-dinitrobenzene	0.20	0.22720	113.6	114	Y
JPL2-CP76(0.5)	250274	1,2-dinitrobenzene	0.20	0.22507	112.5	113	Y
JPL2-CP77(0.5)	250274	1,2-dinitrobenzene	0.20	0.22061	110.3	110	Y
JPL2-CP78(0.5)	250274	1,2-dinitrobenzene	0.20	D	D	D	Y
JPL2-CP79(0.5)	250274	1,2-dinitrobenzene	0.20	0.22359	111.8	112	Y
JPL2-CP80(0.5)	250274	1,2-dinitrobenzene	0.20	0.22651	113.3	113	Y
JPL2-CP81(0.5)	250274	1,2-dinitrobenzene	0.20	0.22749	113.7	114	Y
JPL2-CP82(0.5)	250274	1,2-dinitrobenzene	0.20	0.22661	113.3	113	Y
JPL2-CP83(0.5)	250274	1,2-dinitrobenzene	0.20	0.24300	121.5	122	Y
JPL2-CP85(0.5)	250274	1,2-dinitrobenzene	0.20	0.22607	113.0	113	Y
JPL2-CP87(0.5)	250274	1,2-dinitrobenzene	0.20	0.22743	113.7	114	Y

D - surrogate diluted out
SDG - sample delivery group

Table E-3

Explosives
Surrogate Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 5)

Laboratory: Severn Trent/Test America

SDG: Various - see table

Percent recovery (%R) = SF/SS x 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample Identification:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL2-CP88(0.5)	250274	1,2-dinitrobenzene	0.20	0.22446	112.2	112	Y
JPL2-CP89(0.5)	250274	1,2-dinitrobenzene	0.20	0.22956	114.8	115	Y
JPL2-CP92(0.5)	250274	1,2-dinitrobenzene	0.20	0.22820	114.1	114	Y
JPL2-AP56(0.5)	250285	1,2-dinitrobenzene	0.20	0.28225	141.1	141	Y
JPL2-AP57(0.5)	250285	1,2-dinitrobenzene	0.20	0.24007	120.0	120	Y
JPL2-AP58(0.5)	250285	1,2-dinitrobenzene	0.20	0.22149	110.7	111	Y
JPL2-AP59(0.5)	250285	1,2-dinitrobenzene	0.20	0.22212	111.1	111	Y
JPL2-AP61(0.5)	250285	1,2-dinitrobenzene	0.20	0.22021	110.1	110	Y
JPL2-AF37(2)	250285	1,2-dinitrobenzene	0.20	0.26007	130.0	130	Y
JPL2-AF38(2)	250285	1,2-dinitrobenzene	0.20	0.22188	110.9	111	Y
JPL2-AP62(0.5)	250285	1,2-dinitrobenzene	0.20	0.22852	114.3	114	Y
JPL2-AP63(0.5)	250285	1,2-dinitrobenzene	0.20	0.22880	114.4	114	Y
JPL2-AP64(0.5)	250285	1,2-dinitrobenzene	0.20	0.23924	119.6	120	Y
JPL2-AP65(0.5)	250285	1,2-dinitrobenzene	0.20	0.23837	119.2	119	Y
JPL2-AF39(2)	250285	1,2-dinitrobenzene	0.20	0.21879	109.4	109	Y
JPL2-AP66(0.5)	250285	1,2-dinitrobenzene	0.20	0.22045	110.2	110	Y
JPL2-AP67(0.5)	250285	1,2-dinitrobenzene	0.20	0.22928	114.6	115	Y
JPL2-AP68(0.5)	250285	1,2-dinitrobenzene	0.20	0.23467	117.3	117	Y
JPL2-AF40(2)	250285	1,2-dinitrobenzene	0.20	0.22408	112.0	112	Y
JPL2-AP70(0.5)	250293	1,2-dinitrobenzene	0.20	0.21742	108.7	109	Y
JPL2-AP71(0.5)	250293	1,2-dinitrobenzene	0.20	0.21815	109.1	109	Y
JPL2-AP72(0.5)	250293	1,2-dinitrobenzene	0.20	0.21508	107.5	108	Y
JPL2-AP73(0.5)	250293	1,2-dinitrobenzene	0.20	0.21621	108.1	108	Y
JPL2-AP74(0.5)	250293	1,2-dinitrobenzene	0.20	0.21530	107.7	108	Y
JPL2-AP73-D(0.5)	250293	1,2-dinitrobenzene	0.20	0.20781	103.9	104	Y
JPL2-AP74-D(0.5)	250293	1,2-dinitrobenzene	0.20	0.20741	103.7	104	Y
JPL2-AP75(0.5)	250332	1,2-dinitrobenzene	0.20	0.21271	106.4	106	Y
JPL2-AF41(2)	250332	1,2-dinitrobenzene	0.20	0.21073	105.4	105	Y
JPL2-AP79(0.5)	250332	1,2-dinitrobenzene	0.20	0.20803	104.0	104	Y
JPL2-AP80(0.5)	250332	1,2-dinitrobenzene	0.20	0.23010	115.1	115	Y
JPL2-AP82(0.5)	250332	1,2-dinitrobenzene	0.20	0.20670	103.4	103	Y
JPL2-AF42(2)	250332	1,2-dinitrobenzene	0.20	0.20918	104.6	105	Y
JPL2-AP83(0.5)	250332	1,2-dinitrobenzene	0.20	0.20407	102.0	102	Y
JPL2-AP84(0.5)	250332	1,2-dinitrobenzene	0.20	0.20810	104.1	104	Y
JPL2-AP85(0.5)	250332	1,2-dinitrobenzene	0.20	0.21062	105.3	105	Y
JPL2-AP86(0.5)	250332	1,2-dinitrobenzene	0.20	0.20627	103.1	103	Y
JPL2-AP87(0.5)	250332	1,2-dinitrobenzene	0.20	0.20457	102.3	102	Y
JPL2-AF43(2)	250332	1,2-dinitrobenzene	0.20	0.20599	103.0	103	Y
JPL2-AP88(0.5)	250332	1,2-dinitrobenzene	0.20	0.21113	105.6	106	Y
JPL2-AP89(0.5)	250332	1,2-dinitrobenzene	0.20	0.20749	103.7	104	Y
JPL2-AP90(0.5)	250332	1,2-dinitrobenzene	0.20	0.20310	101.6	102	Y
JPL2-AP91(0.5)	250340	1,2-dinitrobenzene	0.20	0.20313	101.6	102	Y
JPL2-AP92(0.5)	250340	1,2-dinitrobenzene	0.20	0.20986	104.9	105	Y
JPL2-AP93(0.5)	250340	1,2-dinitrobenzene	0.20	0.20525	102.6	103	Y
JPL2-AP94(0.5)	250378	1,2-dinitrobenzene	0.20	0.21633	108.2	108	Y
JPL2-AP94(0.5)	250387	1,2-dinitrobenzene	0.20	0.21633	108.2	108	Y
JPL2-SP1(0)	250401	1,2-dinitrobenzene	0.20	0.21578	107.9	108	Y
JPL2-SP2(0)	250401	1,2-dinitrobenzene	0.20	0.22857	114.3	114	Y
JPL2-SP3(0)	250401	1,2-dinitrobenzene	0.20	0.21911	109.6	110	Y
JPL2-SP4(1)	250418	1,2-dinitrobenzene	0.20	0.22146	110.7	111	Y
JPWR367-2W-1	500-4599	1,2-dinitrobenzene	0.20	0.20819	104.1	104	Y
JPWR367-2W-2	500-4599	1,2-dinitrobenzene	0.20	0.21093	105.5	105	Y
JPWR367-2W-4	500-4599	1,2-dinitrobenzene	0.20	0.20538	102.7	103	Y
JPWR367-2W-5	500-4599	1,2-dinitrobenzene	0.20	0.21123	105.6	106	Y

D - surrogate diluted out
SDG - sample delivery group

Table E-3

Explosives
Surrogate Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 4 of 5)

Laboratory: Severn Trent/Test America

SDG: Various - see table

Percent recovery (%R) = SF/SS x 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample Identification:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPWR367-2W-7	500-4599	1,2-dinitrobenzene	0.20	0.21345	106.7	107	Y
JPWR367-2W-8	500-4599	1,2-dinitrobenzene	0.20	0.20821	104.1	104	Y
JPWR367-2W-10	500-4599	1,2-dinitrobenzene	0.20	0.20609	103.0	103	Y
JPWR367-2W-11	500-4599	1,2-dinitrobenzene	0.20	0.20359	101.8	102	Y
JPWR367-2W-12	500-4599	1,2-dinitrobenzene	0.20	0.20851	104.3	104	Y
JPWR367-2W-14	500-4599	1,2-dinitrobenzene	0.20	0.20477	102.4	102	Y
JPWR367-2W-15	500-4599	1,2-dinitrobenzene	0.20	0.20899	104.5	104	Y
JPWR367-2W-16	500-4599	1,2-dinitrobenzene	0.20	0.20655	103.3	103	Y
JPWR367-2W-4-D	500-4599	1,2-dinitrobenzene	0.20	0.20489	102.4	102	Y
JPWR367-2W-8-D	500-4599	1,2-dinitrobenzene	0.20	0.20609	103.0	103	Y
JPWR368-2E-1	500-4602	1,2-dinitrobenzene	0.20	0.20579	102.9	103	Y
JPWR368-2E-3	500-4602	1,2-dinitrobenzene	0.20	0.20550	102.8	103	Y
JPWR368-2E-4	500-4602	1,2-dinitrobenzene	0.20	0.19924	99.6	100	Y
JPWR368-2E-6	500-4602	1,2-dinitrobenzene	0.20	0.20024	100.1	100	Y
JPWR368-2E-7	500-4602	1,2-dinitrobenzene	0.20	0.20439	102.2	102	Y
JPWR368-2E-8	500-4602	1,2-dinitrobenzene	0.20	0.20526	102.6	103	Y
JPWR368-2E-9	500-4602	1,2-dinitrobenzene	0.20	0.20204	101.0	101	Y
JPWR368-2E-11	500-4602	1,2-dinitrobenzene	0.20	0.20112	100.6	101	Y
JPWR368-2E-12	500-4602	1,2-dinitrobenzene	0.20	0.20950	104.8	105	Y
JPWR368-2E-13	500-4602	1,2-dinitrobenzene	0.20	0.20218	101.1	101	Y
JPWR368-2E-15	500-4602	1,2-dinitrobenzene	0.20	0.20301	101.5	102	Y
JPWR368-2E-16	500-4602	1,2-dinitrobenzene	0.20	0.20224	101.1	101	Y
JPWR368-2E-9-D	500-4602	1,2-dinitrobenzene	0.20	0.19930	99.7	100	Y
JPWR368-2E-12-D	500-4602	1,2-dinitrobenzene	0.20	0.19975	99.9	100	Y
JPWR-369-1W-1	500-4661	1,2-dinitrobenzene	0.20	0.20169	100.8	101	Y
JPWR-369-1W-2	500-4661	1,2-dinitrobenzene	0.20	0.21111	105.6	106	Y
JPWR-369-1W-3	500-4661	1,2-dinitrobenzene	0.20	0.19460	97.3	97	Y
JPWR-369-1W-5	500-4661	1,2-dinitrobenzene	0.20	0.19293	96.5	96	Y
JPWR-369-1W-7	500-4661	1,2-dinitrobenzene	0.20	0.20383	101.9	102	Y
JPWR-369-1W-8	500-4661	1,2-dinitrobenzene	0.20	0.19819	99.1	99	Y
JPWR-369-1W-10	500-4661	1,2-dinitrobenzene	0.20	0.18922	94.6	95	Y
JPWR-369-1W-11	500-4661	1,2-dinitrobenzene	0.20	0.19099	95.5	95	Y
JPWR-369-1W-12	500-4661	1,2-dinitrobenzene	0.20	0.18983	94.9	95	Y
JPWR-369-1W-13	500-4661	1,2-dinitrobenzene	0.20	0.19345	96.7	97	Y
JPWR-369-1W-14	500-4661	1,2-dinitrobenzene	0.20	0.19288	96.4	96	Y
JPWR-369-1W-16	500-4661	1,2-dinitrobenzene	0.20	0.18496	92.5	92	Y
JPWR-369-1W-5-D	500-4661	1,2-dinitrobenzene	0.20	0.19046	95.2	95	Y
JPWR-369-1W-14-D	500-4661	1,2-dinitrobenzene	0.20	0.20237	101.2	101	Y
JPWR370-1E-2	500-4662	1,2-dinitrobenzene	0.20	0.19576	97.9	98	Y
JPWR370-1E-3	500-4662	1,2-dinitrobenzene	0.20	0.20382	101.9	102	Y
JPWR370-1E-5	500-4662	1,2-dinitrobenzene	0.20	0.19654	98.3	98	Y
JPWR370-1E-6	500-4662	1,2-dinitrobenzene	0.20	0.20153	100.8	101	Y
JPWR370-1E-8	500-4662	1,2-dinitrobenzene	0.20	0.20405	102.0	102	Y
JPWR370-1E-9	500-4662	1,2-dinitrobenzene	0.20	0.19832	99.2	99	Y
JPWR370-1E-11	500-4662	1,2-dinitrobenzene	0.20	0.20189	100.9	101	Y
JPWR370-1E-12	500-4662	1,2-dinitrobenzene	0.20	0.19416	97.1	97	Y
JPWR370-1E-13	500-4662	1,2-dinitrobenzene	0.20	0.19718	98.6	99	Y
JPWR370-1E-14	500-4662	1,2-dinitrobenzene	0.20	0.19700	98.5	98	Y
JPWR370-1E-15	500-4662	1,2-dinitrobenzene	0.20	0.19660	98.3	98	Y
JPWR370-1E-16	500-4662	1,2-dinitrobenzene	0.20	0.19431	97.2	97	Y
JPWR370-1E-13-D	500-4662	1,2-dinitrobenzene	0.20	0.19739	98.7	99	Y
JPWR370-1E-15-D	500-4662	1,2-dinitrobenzene	0.20	0.19917	99.6	100	Y
JPL2-Stormwater-US#5	500-5427	1,2-dinitrobenzene	0.18	0.12815	69.4	69	Y
JPL3-Stormwater-US#5	500-5427	1,2-dinitrobenzene	0.18	0.13899	75.3	75	Y

D - surrogate diluted out
SDG - sample delivery group

Table E-3

Explosives
Surrogate Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 5 of 5)

Laboratory: Severn Trent/Test America

SDG: Various - see table

Percent recovery (%R) = SF/SS x 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample Identification:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL3-GENFILL	500-5635	1,2-dinitrobenzene	0.20	0.19030	95.2	95	Y
JPL3-Topsoil	500-5635	1,2-dinitrobenzene	0.20	0.19769	98.8	99	Y
JPL3-Blast Pit (2)	500-5681	1,2-dinitrobenzene	0.20	0.20205	101.0	101	Y
JPM4-SB-1-RAW-8/2	500-5718	1,2-dinitrobenzene	0.19	0.12712	65.7	66	Y
JPL3-STOCKPILE-1(0)	500-5719	1,2-dinitrobenzene	0.20	0.18922	94.6	95	Y
JPL3-STOCKPILE-2(0)	500-5719	1,2-dinitrobenzene	0.20	0.19098	95.5	95	Y
JPM4-Sediment-8/2	500-5720	1,2-dinitrobenzene	0.20	0.18817	94.1	94	Y
JPM4-STORMWATER-US#6	500-6088	1,2-dinitrobenzene	0.19	0.19766	102.1	102	Y
JPM4-STORMWATER-DS#6	500-6088	1,2-dinitrobenzene	0.16	0.16720	107.3	107	Y
JPL3-Stormwater-US#6	500-6089	1,2-dinitrobenzene	0.15	0.15982	107.9	108	Y
JPL3-Stormwater-DS#6	500-6089	1,2-dinitrobenzene	0.20	0.19878	99.4	99	Y
JPL3-AP24(0.5)	500-6650	1,2-dinitrobenzene	0.20	0.21304	106.5	107	Y
JPL3-AP25(0.5)	500-6650	1,2-dinitrobenzene	0.20	0.21713	108.6	109	Y
JPL3-AP26(0.5)	500-6650	1,2-dinitrobenzene	0.20	0.21246	106.2	106	Y
JPL3-AP27(0.5)	500-6650	1,2-dinitrobenzene	0.20	0.21158	105.8	106	Y
JPL3-AP28(0.5)	500-6650	1,2-dinitrobenzene	0.20	0.21417	107.1	107	Y
JPL3-AP29(0.5)	500-6650	1,2-dinitrobenzene	0.20	0.21473	107.4	108	Y
JPL3-AF21(1)	500-6650	1,2-dinitrobenzene	0.20	0.21308	106.5	107	Y
JPL3-AF22(1)	500-6650	1,2-dinitrobenzene	0.20	0.21447	107.2	107	Y
JPL3-AF23(1)	500-6650	1,2-dinitrobenzene	0.20	0.21086	105.4	105	Y
JPL3-AF24(1)	500-6650	1,2-dinitrobenzene	0.20	0.21408	107.0	107	Y
JPL3-AP20(0.5)	500-6651	1,2-dinitrobenzene	0.20	0.21434	107.2	107	Y
JPL3-AP21(0.5)	500-6651	1,2-dinitrobenzene	0.20	0.21289	106.4	106	Y
JPL3-AP22(0.5)	500-6651	1,2-dinitrobenzene	0.20	0.21281	106.4	106	Y
JPL3-AP23(0.5)	500-6651	1,2-dinitrobenzene	0.20	0.21423	107.1	107	Y
JPL3-AF17(1)	500-6651	1,2-dinitrobenzene	0.20	0.21456	107.3	107	Y
JPL3-AF18(1)	500-6651	1,2-dinitrobenzene	0.20	0.21305	106.5	107	Y
JPL3-AF19(1)	500-6651	1,2-dinitrobenzene	0.20	0.21482	107.4	107	Y
JPL3-AF20(1)	500-6651	1,2-dinitrobenzene	0.20	0.21184	105.9	106	Y
JPL3-Concrete	500-6713	1,2-dinitrobenzene	0.20	0.21812	109.1	109	Y
JPL3-AP32(0.5)	500-6714	1,2-dinitrobenzene	0.20	0.21577	107.9	108	Y
JPL2-CP95(0.5)	500-6900	1,2-dinitrobenzene	0.20	0.19932	99.7	100	Y
JPL2-CP96(0.5)	500-6900	1,2-dinitrobenzene	0.20	0.19830	99.2	99	Y
JPL2-CP97(0.5)	500-6900	1,2-dinitrobenzene	0.20	0.19607	98.0	98	Y
JPL2-CP98(0.5)	500-6900	1,2-dinitrobenzene	0.20	0.19774	98.9	99	Y
JPM4-Demo Debris	500-7026	1,2-dinitrobenzene	0.20	0.19508	97.5	98	Y
JPL3-SP1(0.5)	500-7047	1,2-dinitrobenzene	0.20	0.19453	97.3	97	Y
JPL3-SP2(0.5)	500-7047	1,2-dinitrobenzene	0.20	0.19517	97.6	98	Y
JPL3-SP3(0.5)	500-7047	1,2-dinitrobenzene	0.20	0.19820	99.1	99	Y
JPL3-SP4(0.5)	500-7047	1,2-dinitrobenzene	0.20	0.19756	98.8	99	Y
JPL3-SP5(0.5)	500-7047	1,2-dinitrobenzene	0.20	0.20296	101.5	101	Y
JPL3-SP6(0.5)	500-7047	1,2-dinitrobenzene	0.20	0.19472	97.4	97	Y
JP-BorrowSource Clay 1	500-7048	1,2-dinitrobenzene	0.20	0.21163	105.8	106	Y
JPM4 POST SB1 NN	500-7145	1,2-dinitrobenzene	0.20	0.21365	106.8	107	Y
JPM4 POST SB1 NE	500-7145	1,2-dinitrobenzene	0.20	0.20978	104.9	105	Y
JPM4 POST SB1 SN	500-7145	1,2-dinitrobenzene	0.20	0.20937	104.7	105	Y
JPM4 POST SB1 SE	500-7145	1,2-dinitrobenzene	0.20	0.21246	106.2	106	Y

D - surrogate diluted out
SDG - sample delivery group

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 15)

Laboratory: Severn Trent

SDG: 247884

Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	984	105.2	105
RDX	940	0	920.25	97.9	98
1,3,5-TNB	925	0	1001.1	108.2	108
1,3-DNB	970	0	959.55	98.9	99
NB	945	0	979.05	103.6	104
2,4,6-TNT	935	0	1025.65	109.7	110
Tetryl	1940	0	1968.05	101.4	101
2,4-DNT	950	0	1021.05	107.5	107
2,6-DNT	1960	0	2053.65	104.8	105
2-AM-4,6-DNT	915	0	993.9	108.6	109
4-AM-2,6-DNT	1950	0	1955.1	100.3	100
2-NT	1925	0	2037.55	105.8	106
4-NT	1960	0	2053.75	104.8	105
3-NT	1990	0	2133.7	107.2	107

Laboratory: Severn Trent

SDG: 249025

Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1051.4	112.4	112
RDX	940	0	1047.55	111.4	111
1,3,5-TNB	925	0	1025.75	110.9	111
1,3-DNB	970	0	1012.7	104.4	104
NB	945	0	1000.4	105.9	106
2,4,6-TNT	935	0	998.65	106.8	107
Tetryl	1940	0	1925.1	99.2	99
2,4-DNT	950	0	1014.9	106.8	107
2,6-DNT	1960	0	1982.15	101.1	101
2-AM-4,6-DNT	915	0	997.65	109.0	109
4-AM-2,6-DNT	1950	0	2034.1	104.3	104
2-NT	1925	0	1957.15	101.7	102
4-NT	1960	0	1993.6	101.7	102
3-NT	1990	0	2000.6	100.5	101

Laboratory: Severn Trent

SDG: 249144

Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1082.25	115.7	116
RDX	940	0	995.55	105.9	106
1,3,5-TNB	925	0	1117.5	120.8	121
1,3-DNB	970	0	1109.35	114.4	114
NB	945	0	1052.65	111.4	111
2,4,6-TNT	935	0	1133.4	121.2	121
Tetryl	1940	0	1872.45	96.5	97
2,4-DNT	950	0	1107.45	116.6	117
2,6-DNT	1960	0	1981.85	101.1	101
2-AM-4,6-DNT	915	0	1010.25	110.4	110
4-AM-2,6-DNT	1950	0	2042.15	104.7	105
2-NT	1925	0	2012.65	104.6	105
4-NT	1960	0	2036.85	103.9	104
3-NT	1990	0	2068	103.9	104

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 15)

Laboratory: Severn Trent

SDG: 249183
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	%R Reported
TCLP 2,4-DNT	1	0	1.504	101.6	102

Laboratory: Severn Trent

SDG: 249398
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	962.8	103.0	103
RDX	940	0	922.1	98.1	98
1,3,5-TNB	925	0	970.3	104.9	105
1,3-DNB	970	0	951.6	98.1	98
NB	945	0	927.25	98.1	98
2,4,6-TNT	935	0	954.7	102.1	102
Tetryl	1940	0	1831	94.4	94
2,4-DNT	950	0	978.2	103.0	103
2,6-DNT	1960	0	1850.3	94.4	94
2-AM-4,6-DNT	915	0	929.25	101.6	102
4-AM-2,6-DNT	1950	0	1868.9	95.8	96
2-NT	1925	0	1830.95	95.1	95
4-NT	1960	0	1892.35	96.5	97
3-NT	1990	0	1914.2	96.2	96

Laboratory: Severn Trent

SDG: 249477
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	%R Reported
TCLP 2,4-DNT	1	0	1.529	103.3	103

Laboratory: Severn Trent

SDG: 249602
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1041.55	111.4	111
RDX	940	0	981.45	104.4	104
1,3,5-TNB	925	0	1009	109.1	109
1,3-DNB	970	0	1003.55	103.5	103
NB	945	0	1009.25	106.8	107
2,4,6-TNT	935	0	994.85	106.4	106
Tetryl	1940	0	1916.25	98.8	99
2,4-DNT	950	0	1008.6	106.2	106
2,6-DNT	1960	0	1981.25	101.1	101
2-AM-4,6-DNT	915	0	990.1	108.2	108
4-AM-2,6-DNT	1950	0	2019.25	103.6	104
2-NT	1925	0	2012.5	104.5	105
4-NT	1960	0	2026.4	103.4	103
3-NT	1990	0	2029.7	102.0	102

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 15)

Laboratory: Severn Trent

SDG: 249603
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1041.55	111.4	111
RDX	940	0	981.45	104.4	104
1,3,5-TNB	925	0	1009	109.1	109
1,3-DNB	970	0	1003.55	103.5	103
NB	945	0	1009.25	106.8	107
2,4,6-TNT	935	0	994.85	106.4	106
Tetryl	1940	0	1916.25	98.8	99
2,4-DNT	950	0	1008.6	106.2	106
2,6-DNT	1960	0	1981.25	101.1	101
2-AM-4,6-DNT	915	0	990.1	108.2	108
4-AM-2,6-DNT	1950	0	2019.25	103.6	104
2-NT	1925	0	2012.5	104.5	105
4-NT	1960	0	2026.4	103.4	103
3-NT	1990	0	2029.7	102.0	102

Laboratory: Severn Trent

SDG: 249776
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	1	0	1.618	111.1	111
RDX	1	0	1.571	107.2	107
1,3,5-TNB	1	0	1.605	111.3	111
1,3-DNB	2	0	1.558	103.0	103
NB	1	0	1.494	101.4	101
2,4,6-TNT	1	0	1.622	111.3	111
Tetryl	3	0	3.118	103.1	103
2,4-DNT	1	0	1.602	108.2	108
2,6-DNT	3	0	3.162	103.5	104
2-AM-4,6-DNT	1	0	1.588	111.4	111
4-AM-2,6-DNT	3	0	3.168	104.2	104
2-NT	3	0	2.976	99.2	99
4-NT	3	0	3.049	99.8	100
3-NT	3	0	3.033	97.8	98

Laboratory: Severn Trent

SDG: 249944
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1057.95	113.1	113
RDX	940	0	1006.9	107.1	107
1,3,5-TNB	925	0	1033.35	111.7	112
1,3-DNB	970	0	1020.05	105.2	105
NB	945	0	1022.45	108.2	108
2,4,6-TNT	935	0	1008.25	107.8	108
Tetryl	1940	0	1925.85	99.3	99
2,4-DNT	950	0	1019.3	107.3	107
2,6-DNT	1960	0	2012.75	102.7	103
2-AM-4,6-DNT	915	0	999.05	109.2	109
4-AM-2,6-DNT	1950	0	2069.5	106.1	106
2-NT	1925	0	2026.25	105.3	105
4-NT	1960	0	2039.65	104.1	104
3-NT	1990	0	2043.6	102.7	103

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 250012
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1026.85	109.8	110
RDX	940	0	971.8	103.4	103
1,3,5-TNB	925	0	1010.9	109.3	109
1,3-DNB	970	0	996.65	102.7	103
NB	945	0	1013.5	107.2	107
2,4,6-TNT	935	0	1025	109.6	110
Tetryl	1940	0	1963.85	101.2	101
2,4-DNT	950	0	1019.6	107.3	107
2,6-DNT	1960	0	1977	100.9	101
2-AM-4,6-DNT	915	0	991.45	108.4	108
4-AM-2,6-DNT	1950	0	1981.85	101.6	102
2-NT	1925	0	2019.75	104.9	105
4-NT	1960	0	2046.4	104.4	104
3-NT	1990	0	2054.5	103.2	103

Laboratory: Severn Trent

SDG: 250165
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1052.3	112.5	113
RDX	940	0	1018.3	108.3	108
1,3,5-TNB	925	0	1048.95	113.4	113
1,3-DNB	970	0	1044.85	107.7	108
NB	945	0	1045	110.6	111
2,4,6-TNT	935	0	1013.35	108.4	108
Tetryl	1940	0	1957.75	100.9	101
2,4-DNT	950	0	1054.3	111.0	111
2,6-DNT	1960	0	2028.85	103.5	104
2-AM-4,6-DNT	915	0	1014.15	110.8	111
4-AM-2,6-DNT	1950	0	2056.25	105.4	105
2-NT	1925	0	2067.65	107.4	107
4-NT	1960	0	2095	106.9	107
3-NT	1990	0	2092.4	105.1	105

Laboratory: Severn Trent

SDG: 250224
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	974	104.2	104
RDX	940	0	906.85	96.5	96
1,3,5-TNB	925	0	944.05	102.1	102
1,3-DNB	970	0	921.2	95.0	95
NB	945	0	933.3	98.8	99
2,4,6-TNT	935	0	909.95	97.3	97
Tetryl	1940	0	1676.05	86.4	86
2,4-DNT	950	0	940.1	99.0	99
2,6-DNT	1960	0	1892.4	96.6	97
2-AM-4,6-DNT	915	0	905.55	99.0	99
4-AM-2,6-DNT	1950	0	1779.45	91.3	91
2-NT	1925	0	1770.6	92.0	92
4-NT	1960	0	1802.65	92.0	92
3-NT	1990	0	1786.7	89.8	90

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 250253
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1038.2	111.0	111
RDX	940	0	969.8	103.2	103
1,3,5-TNB	925	0	997.7	107.9	108
1,3-DNB	970	0	985.35	101.6	102
NB	945	0	973.75	103.0	103
2,4,6-TNT	935	0	970.35	103.8	104
Tetryl	1940	0	1794.1	92.5	92
2,4-DNT	950	0	989.4	104.1	104
2,6-DNT	1960	0	1943.55	99.2	99
2-AM-4,6-DNT	915	0	978.8	107.0	107
4-AM-2,6-DNT	1950	0	1951	100.1	100
2-NT	1925	0	1931	100.3	100
4-NT	1960	0	1942.6	99.1	99
3-NT	1990	0	1966.65	98.8	99

Laboratory: Severn Trent

SDG: 250262
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1059.35	113.3	113
RDX	940	0	1010.6	107.5	108
1,3,5-TNB	925	0	1023.15	110.6	111
1,3-DNB	970	0	1012.45	104.4	104
NB	945	0	992.65	105.0	105
2,4,6-TNT	935	0	1022.05	109.3	109
Tetryl	1940	0	1933.05	99.6	100
2,4-DNT	950	0	1001.75	105.4	105
2,6-DNT	1960	0	1993.5	101.7	102
2-AM-4,6-DNT	915	0	992.6	108.5	108
4-AM-2,6-DNT	1950	0	2001.5	102.6	103
2-NT	1925	0	2011.85	104.5	105
4-NT	1960	0	2029.85	103.6	104
3-NT	1990	0	2061.95	103.6	104

Laboratory: Severn Trent

SDG: 250274
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1074.65	114.9	115
RDX	940	0	997	106.1	106
1,3,5-TNB	925	0	1022.9	110.6	111
1,3-DNB	970	0	1016.5	104.8	105
NB	945	0	993.25	105.1	105
2,4,6-TNT	935	0	1023	109.4	109
Tetryl	1940	0	1924.75	99.2	99
2,4-DNT	950	0	1013.9	106.7	107
2,6-DNT	1960	0	2007.9	102.4	102
2-AM-4,6-DNT	915	0	1001.8	109.5	109
4-AM-2,6-DNT	1950	0	2026.35	103.9	104
2-NT	1925	0	2016.05	104.7	105
4-NT	1960	0	2039	104.0	104
3-NT	1990	0	2065.55	103.8	104

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 250285
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1137.8	121.7	122
RDX	940	0	1089.65	115.9	116
1,3,5-TNB	925	0	1062.4	114.9	115
1,3-DNB	970	0	1072.25	110.5	111
NB	945	0	1046.25	110.7	111
2,4,6-TNT	935	0	1072.55	114.7	115
Tetryl	1940	0	2073.85	106.9	107
2,4-DNT	950	0	1064.6	112.1	112
2,6-DNT	1960	0	2101	107.2	107
2-AM-4,6-DNT	915	0	1054.75	115.3	115
4-AM-2,6-DNT	1950	0	2185.95	112.1	112
2-NT	1925	0	2099.45	109.1	109
4-NT	1960	0	2138.8	109.1	109
3-NT	1990	0	2199.35	110.5	111

Laboratory: Severn Trent

SDG: 250293
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1065.25	113.9	114
RDX	940	0	1010.2	107.5	107
1,3,5-TNB	925	0	1049.45	113.5	113
1,3-DNB	970	0	1029.7	106.2	106
NB	945	0	1025.6	108.5	109
2,4,6-TNT	935	0	1046.35	111.9	112
Tetryl	1940	0	2021.7	104.2	104
2,4-DNT	950	0	1031	108.5	109
2,6-DNT	1960	0	2063.85	105.3	105
2-AM-4,6-DNT	915	0	1020	111.5	111
4-AM-2,6-DNT	1950	0	2065.5	105.9	106
2-NT	1925	0	2110.3	109.6	110
4-NT	1960	0	2147.15	109.5	110
3-NT	1990	0	2124.95	106.8	107

Laboratory: Severn Trent

SDG: 250332
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1077.5	115.2	115
RDX	940	0	721.9	76.8	77
1,3,5-TNB	925	0	1032.7	111.6	112
1,3-DNB	970	0	1029.35	106.1	106
NB	945	0	1007.4	106.6	107
2,4,6-TNT	935	0	1029	110.1	110
Tetryl	1940	0	1977.65	101.9	102
2,4-DNT	950	0	1040.55	109.5	110
2,6-DNT	1960	0	2070.95	105.7	106
2-AM-4,6-DNT	915	0	1007.25	110.1	110
4-AM-2,6-DNT	1950	0	2036.7	104.4	104
2-NT	1925	0	2056	106.8	107
4-NT	1960	0	2072.7	105.8	106
3-NT	1990	0	2099.75	105.5	106

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 250340
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1037.4	111.0	111
RDX	940	0	999.15	106.3	106
1,3,5-TNB	925	0	963.3	104.1	104
1,3-DNB	970	0	968.85	99.9	100
NB	945	0	948.45	100.4	100
2,4,6-TNT	935	0	953.85	102.0	102
Tetryl	1940	0	1833	94.5	94
2,4-DNT	950	0	961	101.2	101
2,6-DNT	1960	0	1923.95	98.2	98
2-AM-4,6-DNT	915	0	944.7	103.2	103
4-AM-2,6-DNT	1950	0	1900.4	97.5	97
2-NT	1925	0	1890.6	98.2	98
4-NT	1960	0	1903.1	97.1	97
3-NT	1990	0	1916	96.3	96

Laboratory: Severn Trent

SDG: 250378
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1040.15	111.2	111
RDX	940	0	973.35	103.5	104
1,3,5-TNB	925	0	1027.05	111.0	111
1,3-DNB	970	0	1017.45	104.9	105
NB	945	0	1031.65	109.2	109
2,4,6-TNT	935	0	1022.75	109.4	109
Tetryl	1940	0	1977.7	101.9	102
2,4-DNT	950	0	1039.05	109.4	109
2,6-DNT	1960	0	2092.05	106.7	107
2-AM-4,6-DNT	915	0	1004.85	109.8	110
4-AM-2,6-DNT	1950	0	2021.75	103.7	104
2-NT	1925	0	2088.45	108.5	108
4-NT	1960	0	2139.15	109.1	109
3-NT	1990	0	2108	105.9	106

Laboratory: Severn Trent

SDG: 250401
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1058	113.2	113
RDX	940	0	1001.45	106.5	107
1,3,5-TNB	925	0	1027.95	111.1	111
1,3-DNB	970	0	1014.7	104.6	105
NB	945	0	1002.65	106.1	106
2,4,6-TNT	935	0	1020.65	109.2	109
Tetryl	1940	0	1947.55	100.4	100
2,4-DNT	950	0	1033	108.7	109
2,6-DNT	1960	0	2091.9	106.7	107
2-AM-4,6-DNT	915	0	1011.95	110.6	111
4-AM-2,6-DNT	1950	0	2036.3	104.4	104
2-NT	1925	0	2056.25	106.8	107
4-NT	1960	0	2098.5	107.1	107
3-NT	1990	0	2074.15	104.2	104

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 8 of 15)

Laboratory: Severn Trent

SDG: 250418
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	935	0	1069	114.4	114
RDX	940	0	1002	106.6	107
1,3,5-TNB	925	0	1072	115.9	116
1,3-DNB	970	0	1045	107.7	108
NB	945	0	1030	109.0	109
2,4,6-TNT	935	0	1078	115.3	115
Tetryl	1940	0	2084	107.4	107
2,4-DNT	950	0	1074	113.1	113
2,6-DNT	1960	0	2145	109.4	109
2-AM-4,6-DNT	915	0	1055	115.3	115
4-AM-2,6-DNT	1950	0	2100	107.7	108
2-NT	1925	0	2154	111.9	112
4-NT	1960	0	2184	111.4	111
3-NT	1990	0	2163	108.7	109

Laboratory: Test America

SDG: 500-4599
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	936	0	1040	111.1	112
RDX	940	0	1050	111.7	111
1,3,5-TNB	925	0	1010	109.2	109
1,3-DNB	968	0	995	102.8	103
NB	946	0	979	103.5	103
2,4,6-TNT	933	0	975	104.5	104
Tetryl	1940	0	1900	97.9	98
2,4-DNT	950	0	1010	106.3	106
2,6-DNT	1960	0	1960	100.0	100
2-AM-4,6-DNT	915	0	1000	109.3	110
4-AM-2,6-DNT	1950	0	2000	102.6	102
2-NT	1930	0	1970	102.1	102
4-NT	1960	0	1990	101.5	102
3-NT	1990	0	2050	103.0	103

Laboratory: Test America

SDG: 500-4602
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	936	0	1030	110.0	110
RDX	940	0	1010	107.4	107
1,3,5-TNB	925	0	986	106.6	107
1,3-DNB	968	0	970	100.2	100
NB	946	0	961	101.6	102
2,4,6-TNT	933	0	963	103.2	103
Tetryl	1940	0	1900	97.9	98
2,4-DNT	950	0	969	102.0	101
2,6-DNT	1960	0	1930	98.5	99
2-AM-4,6-DNT	915	0	984	107.5	108
4-AM-2,6-DNT	1950	0	1940	99.5	100
2-NT	1930	0	1920	99.5	100
4-NT	1960	0	1940	99.0	99
3-NT	1990	0	1930	97.0	97

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America

SDG: 500-4661
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	936	0	965	103.1	103
RDX	940	0	950	101.1	101
1,3,5-TNB	925	0	902	97.5	97
1,3-DNB	968	0	891	92.0	92
NB	946	0	876	92.6	93
2,4,6-TNT	933	0	857	91.9	92
Tetryl	1940	0	1690	87.1	87
2,4-DNT	950	0	876	92.2	92
2,6-DNT	1960	0	1770	90.3	91
2-AM-4,6-DNT	915	0	893	97.6	98
4-AM-2,6-DNT	1950	0	1770	90.8	91
2-NT	1930	0	1730	89.6	90
4-NT	1960	0	1760	89.8	90
3-NT	1990	0	1750	87.9	88

Laboratory: Test America

SDG: 500-4662
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	936	0	1038	110.9	111
RDX	940	0	1043	111.0	111
1,3,5-TNB	925	0	996	107.7	108
1,3-DNB	968	0	988	102.0	102
NB	946	0	976	103.2	103
2,4,6-TNT	933	0	976	104.6	104
Tetryl	1940	0	1892	97.5	97
2,4-DNT	950	0	1009	106.3	106
2,6-DNT	1960	0	1959	99.9	100
2-AM-4,6-DNT	915	0	1010	110.3	110
4-AM-2,6-DNT	1950	0	1996	102.4	102
2-NT	1930	0	1963	101.7	102
4-NT	1960	0	2002	102.1	102
3-NT	1990	0	2049	103.0	103

Laboratory: Test America

SDG: 500-5427
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
HMX	3	0	3	95.7	96
RDX	1	0	1	104.2	104
1,3,5-TNB	2	0	1	88.7	89
1,3-DNB	1	0	1	98.6	99
NB	3	0	3	91.5	91
2,4,6-TNT	1	0	1	95.2	95
Tetryl	1	0	1	89.8	90
2,4-DNT	3	0	3	87.0	87
2,6-DNT	3	0	3	91.9	92
2-AM-4,6-DNT	3	0	3	87.2	87
4-AM-2,6-DNT	1	0	1	98.6	98
2-NT	3	0	2	81.2	81
4-NT	1	0	1	94.4	94
3-NT	1	0	1	90.3	90

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America

SDG: 500-5635
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1950	0	1980	101.5	101
2-AM-4,6-DNT	915	0	988	108.0	108
1,3-DNB	968	0	959	99.1	99
2,4-DNT	950	0	943	99.3	99
2,6-DNT	1960	0	1820	92.9	93
HMX	936	0	1010	107.9	108
NB	946	0	962	101.7	102
2-NT	1930	0	1890	97.9	98
3-NT	1990	0	2030	102.0	102
4-NT	1960	0	1960	100.0	100
RDX	940	0	1070	113.8	114
Tetryl	1940	0	1680	86.6	87
1,3,5-TNB	925	0	956	103.4	103
2,4,6-TNT	933	0	883	94.6	95

Laboratory: Test America

SDG: 500-5681
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1950	0	2060	105.6	105
2-AM-4,6-DNT	915	0	1010	110.4	110
1,3-DNB	968	0	1020	105.4	105
2,4-DNT	950	0	994	104.6	105
2,6-DNT	1960	0	1970	100.5	101
HMX	936	0	1070	114.3	115
NB	946	0	1010	106.8	107
2-NT	1930	0	2000	103.6	104
3-NT	1990	0	2000	100.5	101
4-NT	1960	0	2010	102.6	103
RDX	940	0	1040	110.6	111
Tetryl	1940	0	1770	91.2	91
1,3,5-TNB	925	0	1030	111.4	111
2,4,6-TNT	933	0	936	100.3	100

Laboratory: Test America

SDG: 500-5718
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	3.04	0	2	73.0	73
2-AM-4,6-DNT	1.43	0	1	79.7	80
1,3-DNB	1.51	0	1	67.5	67
2,4-DNT	1.48	0	1	74.3	74
2,6-DNT	3.05	0	2	70.2	70
HMX	1.46	0	1	74.7	75
NB	1.47	0	1	65.1	65
2-NT	3	0	2	70.7	70
3-NT	3.1	0	2	66.5	66
4-NT	3.05	0	2	64.9	65
RDX	1.46	0	1	76.0	76
Tetryl	3.03	0	2	69.0	69
1,3,5-TNB	1.44	0	1	73.6	73
2,4,6-TNT	1.45	0	1	74.5	74

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America

SDG: 500-5719

Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1950	0	1850	94.9	95
2-AM-4,6-DNT	915	0	951	103.9	104
1,3-DNB	968	0	918	94.8	95
2,4-DNT	950	0	949	99.9	100
2,6-DNT	1960	0	1820	92.9	93
HMX	936	0	963	102.9	103
NB	946	0	913	96.5	96
2-NT	1930	0	1820	94.3	94
3-NT	1990	0	1910	96.0	96
4-NT	1960	0	1860	94.9	95
RDX	940	0	994	105.7	106
Tetryl	1940	0	1770	91.2	91
1,3,5-TNB	925	0	925	100.0	100
2,4,6-TNT	933	0	902	96.7	97

Laboratory: Test America

SDG: 500-5720

Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1950	0	1850	94.9	95
2-AM-4,6-DNT	915	0	951	103.9	104
1,3-DNB	968	0	918	94.8	95
2,4-DNT	950	0	949	99.9	100
2,6-DNT	1960	0	1820	92.9	93
HMX	936	0	963	102.9	103
NB	946	0	913	96.5	96
2-NT	1930	0	1820	94.3	94
3-NT	1990	0	1910	96.0	96
4-NT	1960	0	1860	94.9	95
RDX	940	0	994	105.7	106
Tetryl	1940	0	1770	91.2	91
1,3,5-TNB	925	0	925	100.0	100
2,4,6-TNT	933	0	902	96.7	97

Laboratory: Test America

SDG: 500-6088

Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	3.04	0	3	105.3	105
2-AM-4,6-DNT	1.43	0	2	113.3	114
1,3-DNB	1.51	0	2	101.3	101
2,4-DNT	1.48	0	2	110.1	110
2,6-DNT	3.05	0	3	103.3	103
HMX	1.46	0	2	106.2	106
NB	1.47	0	1	96.6	97
2-NT	3	0	3	102.0	102
3-NT	3.1	0	3	104.8	105
4-NT	3.05	0	3	98.7	99
RDX	1.46	0	1	102.1	102
Tetryl	3.03	0	3	103.3	104
1,3,5-TNB	1.44	0	2	110.4	110
2,4,6-TNT	1.45	0	2	111.7	111

ug/kg - micrograms per kilogram
 ug/l - micrograms per liter
 SDG - sample delivery group
 TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America

SDG: 500-6089
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	3.04	0	3	105.3	105
2-AM-4,6-DNT	1.43	0	2	113.3	114
1,3-DNB	1.51	0	2	101.3	101
2,4-DNT	1.48	0	2	110.1	110
2,6-DNT	3.05	0	3	103.3	103
HMX	1.46	0	2	106.2	106
NB	1.47	0	1	96.6	97
2-NT	3	0	3	102.0	102
3-NT	3.1	0	3	104.8	105
4-NT	3.05	0	3	98.7	99
RDX	1.46	0	1	102.1	102
Tetryl	3.03	0	3	103.3	104
1,3,5-TNB	1.44	0	2	110.4	110
2,4,6-TNT	1.45	0	2	111.7	111

Laboratory: Test America

SDG: 500-6650
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1950	0	2140	109.7	110
2-AM-4,6-DNT	915	0	1060	115.8	116
1,3-DNB	968	0	1030	106.4	107
2,4-DNT	950	0	1070	112.6	113
2,6-DNT	1960	0	2070	105.6	106
HMX	936	0	1040	111.1	112
NB	946	0	1010	106.8	107
2-NT	1930	0	2040	105.7	106
3-NT	1990	0	2150	108.0	108
4-NT	1960	0	2070	105.6	106
RDX	940	0	1020	108.5	108
Tetryl	1940	0	1930	99.5	99
1,3,5-TNB	925	0	1040	112.4	113
2,4,6-TNT	933	0	1010	108.3	108

Laboratory: Test America

SDG: 500-6651
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1950	0	2140	109.7	110
2-AM-4,6-DNT	915	0	1060	115.8	116
1,3-DNB	968	0	1030	106.4	107
2,4-DNT	950	0	1070	112.6	113
2,6-DNT	1960	0	2070	105.6	106
HMX	936	0	1040	111.1	112
NB	946	0	1010	106.8	107
2-NT	1930	0	2040	105.7	106
3-NT	1990	0	2150	108.0	108
4-NT	1960	0	2070	105.6	106
RDX	940	0	1020	108.5	108
Tetryl	1940	0	1930	99.5	99
1,3,5-TNB	925	0	1040	112.4	113
2,4,6-TNT	933	0	1010	108.3	108

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 13 of 15)

Laboratory: Test America

SDG: 500-6713

Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1950	0	2270	116.4	116
2-AM-4,6-DNT	915	0	1080	118.0	118
1,3-DNB	968	0	1070	110.5	110
2,4-DNT	950	0	1100	115.8	116
2,6-DNT	1960	0	2150	109.7	110
HMX	936	0	1100	117.5	117
NB	946	0	1020	107.8	108
2-NT	1930	0	2070	107.3	108
3-NT	1990	0	2170	109.0	109
4-NT	1960	0	2060	105.1	105
RDX	940	0	1080	114.9	115
Tetryl	1940	0	1880	96.9	97
1,3,5-TNB	925	0	1080	116.8	117
2,4,6-TNT	933	0	1020	109.3	110

Laboratory: Test America

SDG: 500-6714

Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1950	0	2270	116.4	116
2-AM-4,6-DNT	915	0	1080	118.0	118
1,3-DNB	968	0	1070	110.5	110
2,4-DNT	950	0	1100	115.8	116
2,6-DNT	1960	0	2150	109.7	110
HMX	936	0	1100	117.5	117
NB	946	0	1020	107.8	108
2-NT	1930	0	2070	107.3	108
3-NT	1990	0	2170	109.0	109
4-NT	1960	0	2060	105.1	105
RDX	940	0	1080	114.9	115
Tetryl	1940	0	1880	96.9	97
1,3,5-TNB	925	0	1080	116.8	117
2,4,6-TNT	933	0	1020	109.3	110

Laboratory: Test America

SDG: 500-6900

Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1940	0	2060	106.2	106
2-AM-4,6-DNT	910	0	1010	111.0	110
1,3-DNB	963	0	999	103.7	104
2,4-DNT	945	0	1020	107.9	107
2,6-DNT	1950	0	1970	101.0	101
HMX	931	0	1060	113.9	114
NB	941	0	993	105.5	105
2-NT	1920	0	1960	102.1	102
3-NT	1980	0	1980	100.0	100
4-NT	1950	0	1970	101.0	101
RDX	935	0	1030	110.2	110
Tetryl	1930	0	1780	92.2	92
1,3,5-TNB	920	0	1020	110.9	111
2,4,6-TNT	928	0	919	99.0	99

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America

SDG: 500-7026
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1950	0	2020	103.6	104
2-AM-4,6-DNT	915	0	978	106.9	107
1,3-DNB	968	0	982	101.4	101
2,4-DNT	950	0	1030	108.4	108
2,6-DNT	1960	0	1950	99.5	100
HMX	936	0	1050	112.2	113
NB	946	0	975	103.1	103
2-NT	1930	0	2020	104.7	105
3-NT	1990	0	2060	103.5	103
4-NT	1960	0	2040	104.1	104
RDX	940	0	979	104.1	104
Tetryl	1940	0	1730	89.2	89
1,3,5-TNB	925	0	1000	108.1	108
2,4,6-TNT	933	0	894	95.8	96

Laboratory: Test America

SDG: 500-7047
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1950	0	2020	103.6	104
2-AM-4,6-DNT	915	0	978	106.9	107
1,3-DNB	968	0	982	101.4	101
2,4-DNT	950	0	1030	108.4	108
2,6-DNT	1960	0	1950	99.5	100
HMX	936	0	1050	112.2	113
NB	946	0	975	103.1	103
2-NT	1930	0	2020	104.7	105
3-NT	1990	0	2060	103.5	103
4-NT	1960	0	2040	104.1	104
RDX	940	0	979	104.1	104
Tetryl	1940	0	1730	89.2	89
1,3,5-TNB	925	0	1000	108.1	108
2,4,6-TNT	933	0	894	95.8	96

Laboratory: Test America

SDG: 500-7048
Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1950	0	2190	112.3	112
2-AM-4,6-DNT	915	0	1040	113.7	114
1,3-DNB	968	0	1050	108.5	109
2,4-DNT	950	0	1100	115.8	115
2,6-DNT	1960	0	2130	108.7	109
HMX	936	0	1090	116.5	117
NB	946	0	1010	106.8	107
2-NT	1930	0	2070	107.3	108
3-NT	1990	0	2180	109.5	109
4-NT	1960	0	2080	106.1	106
RDX	940	0	1020	108.5	109
Tetryl	1940	0	1880	96.9	97
1,3,5-TNB	925	0	1080	116.8	116
2,4,6-TNT	933	0	951	101.9	102

ug/kg - micrograms per kilogram
ug/l - micrograms per liter
SDG - sample delivery group
TCLP - Toxicity Characteristic Leaching Procedure

Table E-4

Explosives
Laboratory Control Sample Verification

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 15 of 15)

Laboratory: Test America

SDG: 500-7145

Sample Id: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = $(SSC - SC) / SA \times 100$

Compound	Spike Added (ug/kg)	Blank Concentration (ug/kg)	LCS Concentration (ug/kg)	%R Recalculated	%R Reported
4-AM-2,6-DNT	1950	0	2110	108.2	108
2-AM-4,6-DNT	915	0	1060	115.8	116
1,3-DNB	968	0	1040	107.4	107
2,4-DNT	950	0	1080	113.7	114
2,6-DNT	1960	0	2130	108.7	109
HMX	936	0	1070	114.3	115
NB	946	0	1000	105.7	106
2-NT	1930	0	2110	109.3	110
3-NT	1990	0	2230	112.1	112
4-NT	1960	0	2130	108.7	109
RDX	940	0	1030	109.6	109
Tetryl	1940	0	2100	108.2	109
1,3,5-TNB	925	0	1070	115.7	116
2,4,6-TNT	933	0	1080	115.8	115

Table E-5
Explosives
Matrix Spike/Matrix Spike Duplicate Results Verification
Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 11)

Laboratory: Severn Trent

Sample Identification: JPM3-ITF-AF49(2)
SDG: 247884

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) / 2 x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	944	965	0			0	935	925.7	101	100.98	104
RDX	835	928	0	0	940	930.7	89	88.85	89	99.70	0	0.00
1,3,5-TNB	995	988	0	0	925	915.8	108	107.58	108	107.91	0	0.00
1,3-DNB	965	965	0	0	970	960.4	100	99.53	101	100.52	1	1.00
NB	986	977	0	0	945	935.6	104	104.37	104	104.40	0	0.00
2,4,6-TNT	1043	1000	0	0	935	925.7	112	111.55	108	108.05	4	3.64
Tetryl	1913	1777	0	0	1940	1921	99	98.60	93	92.50	6	6.25
2,4-DNT	1084	1057	0	0	950	940.6	114	114.10	112	112.40	2	1.77
2,6-DNT	2102	2058	0	0	1960	1936	107	107.26	106	106.29	1	0.94
2-AM-4,6-DNT	1015	985	0	0	915	905.9	111	110.93	109	108.73	2	1.82
4-AM-2,6-DNT	2046	2057	0	0	1950	1931	105	104.92	107	106.51	2	1.89
2-NT	2082	2052	0	0	1925	1906	108	108.17	108	107.65	0	0.00
4-NT	2067	2025	0	0	1960	1941	105	105.46	104	104.31	1	0.96
3-NT	2106	2083	0	0	1990	1970	106	105.81	106	105.75	0	0.00

Laboratory: Severn Trent

Sample Identification: JPM3-ITF-AF193(2)
SDG: 249025

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) / 2 x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	1029	1037	0			0	930.3	930.3	111	110.58	111
RDX	934	938	0	0	935.3	935.3	100	99.84	100	100.26	0	0.00
1,3,5-TNB	1022	1029	0	0	920.4	920.4	111	111.02	112	111.81	1	0.90
1,3-DNB	1025	1028	0	0	965.2	965.2	106	106.15	106	106.46	0	0.00
NB	1012	1021	0	0	940.3	940.3	108	107.64	109	108.53	1	0.92
2,4,6-TNT	1028	1048	0	0	930.3	930.3	111	110.55	113	112.70	2	1.79
Tetryl	1819	1923	0	0	1930	1930	94	94.26	100	99.66	6	6.19
2,4-DNT	1015	1017	0	0	945.3	945.3	107	107.38	108	107.61	1	0.93
2,6-DNT	1984	2055	0	0	1950	1950	102	101.74	105	105.38	3	2.90
2-AM-4,6-DNT	988	1009	0	0	910.4	910.4	108	108.47	111	110.83	3	2.74
4-AM-2,6-DNT	2019	2040	0	0	1940	1940	104	104.06	105	105.18	1	0.96
2-NT	1975	1983	0	0	1915	1915	103	103.12	104	103.53	1	0.97
4-NT	1994	2010	0	0	1950	1950	102	102.26	103	103.08	1	0.98
3-NT	1996	2011	0	0	1980	1980	101	100.83	102	101.58	1	0.99

Laboratory: Severn Trent

Sample Identification: JPM3-CP7-22
SDG: 249144

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) / 2 x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	987	1014	0			0	930.3	930.3	106	106.14	109
RDX	958	970	0	0	935.3	935.3	102	102.43	104	103.67	2	1.94
1,3,5-TNB	1144	1224	0	0	920.4	920.4	124	124.25	133	133.00	7	7.00
1,3-DNB	1093	1093	0	0	965.2	965.2	113	113.20	113	113.27	0	0.00
NB	1054	1080	0	0	940.3	940.3	112	112.05	115	114.88	3	2.64
2,4,6-TNT	1177	1456	0	0	930.3	930.3	127	126.56	157	156.51	21	21.13
Tetryl	913	1936	0	0	1930	1930	47	47.28	100	100.29	72	72.11
2,4-DNT	1231	1317	0	0	945.3	945.3	130	130.19	139	139.31	7	6.69
2,6-DNT	1985	2168	0	0	1950	1950	102	101.81	111	111.20	8	8.45
2-AM-4,6-DNT	1083	1242	0	0	910.4	910.4	119	118.97	136	136.42	13	13.33
4-AM-2,6-DNT	2472	2174	0	0	1940	1940	127	127.41	112	112.05	13	12.55
2-NT	2009	1972	0	0	1915	1915	105	104.90	103	102.95	2	1.92
4-NT	2027	2022	0	0	1950	1950	104	103.96	104	103.68	0	0.00
3-NT	2041	2106	0	0	1980	1980	103	103.10	106	106.35	3	2.87

D - diluted out due to high concentration in parent sample
SDG - sample delivery group

Table E-5

**Explosives
Matrix Spike/Matrix Spike Duplicate Results Verification
Joliet Army Ammunition Plant - SRU2 and SRU3 LAP**

(Page 2 of 11)

Laboratory: Severn Trent

Sample Identification: JPM3ITFCP1-9(1)
SDG: 249398

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	933	867	0			0	925.7	925.7	101	100.84	94
RDX	865	841	0	0	930.7	930.7	93	92.91	90	90.35	3	3.28
1,3,5-TNB	1131	1382	0	0	915.8	915.8	124	123.55	151	150.95	20	19.64
1,3-DNB	985	1060	0	0	960.4	960.4	103	102.54	110	110.33	7	6.57
NB	985	1020	0	0	935.6	935.6	105	105.23	109	109.06	4	3.74
2,4,6-TNT	4779	4841	4019.158	4019.158	925.7	925.7	82	82.05	89	88.81	8	8.19
Tetryl	2939	5127	1779.307	1779.307	1921	1921	60	60.35	174	174.27	97	97.44
2,4-DNT	3505	3445	2091.386	2091.386	940.6	940.6	150	150.34	144	143.95	4	4.08
2,6-DNT	2488	2443	0	0	1936	1936	128	128.49	126	126.17	2	1.57
2-AM-4,6-DNT	1315	1703	0	0	905.9	905.9	145	145.16	188	188.02	26	25.83
4-AM-2,6-DNT	2424	2393	647.624	647.624	1931	1931	92	91.99	90	90.39	2	2.20
2-NT	1961	2201	0	0	1906	1906	103	102.91	115	115.48	11	11.01
4-NT	2087	2485	0	0	1941	1941	108	107.53	128	128.00	17	16.95
3-NT	1878	1578	0	0	1970	1970	95	95.32	80	80.08	17	17.14

Laboratory: Severn Trent

Sample Identification: JPM3-ITF-AF249(3)
SDG: 249944

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	1015	1019	0			0	930.3	930.3	109	109.10	109
RDX	937	932	0	0	935.3	935.3	100	100.23	100	99.65	0	0.00
1,3,5-TNB	1019	1025	0	0	920.4	920.4	111	110.70	111	111.41	0	0.00
1,3-DNB	1020	1020	0	0	965.2	965.2	106	105.65	106	105.72	0	0.00
NB	1021	1024	0	0	940.3	940.3	109	108.63	109	108.86	0	0.00
2,4,6-TNT	1015	1014	0	0	930.3	930.3	109	109.13	109	109.03	0	0.00
Tetryl	1658	1812	0	0	1930	1930	86	85.90	94	93.88	9	8.89
2,4-DNT	1027	1031	0	0	945.3	945.3	109	108.61	109	109.04	0	0.00
2,6-DNT	2018	2033	0	0	1950	1950	103	103.50	104	104.27	1	0.97
2-AM-4,6-DNT	1001	1006	0	0	910.4	910.4	110	109.99	110	110.49	0	0.00
4-AM-2,6-DNT	2156	2098	0	0	1940	1940	111	111.16	108	108.14	3	2.74
2-NT	2022	2033	0	0	1915	1915	106	105.60	106	106.17	0	0.00
4-NT	2035	2051	0	0	1950	1950	104	104.37	105	105.16	1	0.96
3-NT	2025	2057	0	0	1980	1980	102	102.27	104	103.89	2	1.94

Laboratory: Severn Trent

Sample Identification: JPL5-L4(1)
SDG: 250012

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	1057	1053	0			0	930.3	930.3	114	113.61	113
RDX	951	973	0	0	935.3	935.3	102	101.63	104	104.01	2	1.94
1,3,5-TNB	1022	1026	0	0	920.4	920.4	111	110.99	111	111.50	0	0.00
1,3-DNB	1039	1056	0	0	965.2	965.2	108	107.67	109	109.42	1	0.92
NB	1106	1073	0	0	940.3	940.3	118	117.66	114	114.14	3	3.45
2,4,6-TNT	1451	1203	0	0	930.3	930.3	156	155.98	129	129.27	19	18.95
Tetryl	2529	2517	0	0	1930	1930	131	131.03	130	130.43	1	0.77
2,4-DNT	1010	1020	0	0	945.3	945.3	107	106.85	108	107.87	1	0.93
2,6-DNT	1956	2001	0	0	1950	1950	100	100.30	103	102.59	3	2.96
2-AM-4,6-DNT	1019	1036	0	0	910.4	910.4	112	111.88	114	113.83	2	1.77
4-AM-2,6-DNT	1952	1932	0	0	1940	1940	101	100.63	100	99.61	1	1.00
2-NT	2002	1993	0	0	1915	1915	105	104.56	104	104.09	1	0.96
4-NT	2193	2223	0	0	1950	1950	112	112.44	114	113.99	2	1.77
3-NT	1972	1977	0	0	1980	1980	100	99.59	100	99.85	0	0.00

D - diluted out due to high concentration in parent sample
SDG - sample delivery group

Table E-5

Explosives
Matrix Spike/Matrix Spike Duplicate Results Verification
Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 11)

Laboratory: Severn Trent

Sample Identification: JPM3-ITF-AP256(2)
SDG: 250165

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) / 2 x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	1027	986	0			0	916.7	916.7	112	112.03	108
RDX	881	877	0	0	921.6	921.6	96	95.61	95	95.15	1	1.05
1,3,5-TNB	1023	1012	0	0	906.9	906.9	113	112.83	112	111.60	1	0.89
1,3-DNB	1030	1013	0	0	951	951	108	108.32	106	106.47	2	1.87
NB	1031	1008	0	0	926.5	926.5	111	111.24	109	108.75	2	1.82
2,4,6-TNT	1012	998	0	0	916.7	916.7	110	110.43	109	108.84	1	0.91
Tetryl	1739	1769	0	0	1902	1902	91	91.45	93	93.03	2	2.17
2,4-DNT	1044	1032	0	0	931	931	112	112.15	111	110.81	1	0.90
2,6-DNT	2031	2013	0	0	1922	1922	106	105.66	105	104.75	1	0.95
2-AM-4,6-DNT	1011	1001	0	0	897.1	897.1	113	112.65	112	111.61	1	0.89
4-AM-2,6-DNT	2064	2040	0	0	1912	1912	108	107.94	107	106.72	1	0.93
2-NT	2028	2006	0	0	1887	1887	107	107.47	106	106.28	1	0.94
4-NT	2040	2031	0	0	1922	1922	106	106.15	106	105.66	0	0.00
3-NT	2047	2023	0	0	1951	1951	105	104.94	104	103.70	1	0.96

Laboratory: Severn Trent

Sample Identification: JPM3-ITF-AF49B(1)
SDG: 250224

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) / 2 x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	947	927	2103.781			2103.781	930.3	930.3	-124	-124.30	-127
RDX	859	831	0	0	935.3	935.3	92	91.81	89	88.86	3	3.31
1,3,5-TNB	906	928	0	0	920.4	920.4	98	98.47	101	100.80	3	3.02
1,3-DNB	913	920	0	0	965.2	965.2	95	94.61	95	95.31	0	0.00
NB	931	888	0	0	940.3	940.3	99	99.01	94	94.47	5	5.18
2,4,6-TNT	1354	1646	685.124	685.124	930.3	930.3	72	71.89	103	103.29	35	35.43
Tetryl	1373	1417	0	0	1930	1930	71	71.16	73	73.41	3	2.78
2,4-DNT	1000	1040	0	0	945.3	945.3	106	105.80	110	110.00	4	3.70
2,6-DNT	1944	1914	0	0	1950	1950	100	99.70	98	98.13	2	2.02
2-AM-4,6-DNT	1164	1232	934.726	934.726	910.4	910.4	25	25.22	33	32.68	28	27.59
4-AM-2,6-DNT	2045	2022	569.552	569.552	1940	1940	76	76.07	75	74.89	1	1.32
2-NT	1742	1833	0	0	1915	1915	91	90.96	96	95.74	5	5.35
4-NT	1783	1914	0	0	1950	1950	91	91.42	98	98.17	7	7.41
3-NT	1765	1803	0	0	1980	1980	89	89.12	91	91.08	2	2.22

Laboratory: Severn Trent

Sample Identification: JPL2-AP36(0.5)
SDG: 250253

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) / 2 x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	2676	2625	1586.311			1586.311	921.2	903.4	118	118.32	115
RDX	1001	976	0	0	926.1	908.2	108	108.05	107	107.45	1	0.93
1,3,5-TNB	1027	1020	0	0	911.3	893.7	113	112.65	114	114.18	1	0.88
1,3-DNB	998	985	0	0	955.7	937.2	104	104.41	105	105.14	1	0.96
NB	1002	991	0	0	931	913	108	107.68	109	108.59	1	0.92
2,4,6-TNT	1743	1598	764.32	764.32	921.2	903.4	106	106.25	92	92.31	14	14.14
Tetryl	1419	1492	0	0	1911	1874	74	74.24	79	79.60	7	6.54
2,4-DNT	1306	1272	320.243	320.243	936	917.9	105	105.35	104	103.64	1	0.96
2,6-DNT	2011	1968	0	0	1931	1894	104	104.12	104	103.91	0	0.00
2-AM-4,6-DNT	1426	1372	0	0	901.5	884.1	158	158.15	155	155.16	2	1.92
4-AM-2,6-DNT	2216	2207	0	0	1921	1884	115	115.34	117	117.14	2	1.72
2-NT	1905	1907	0	0	1897	1860	100	100.42	103	102.52	3	2.96
4-NT	1930	1909	0	0	1931	1894	100	99.95	101	100.77	1	1.00
3-NT	1961	1944	0	0	1961	1923	100	100.01	101	101.11	1	1.00

D - diluted out due to high concentration in parent sample
SDG - sample delivery group

Table E-5

Explosives
Matrix Spike/Matrix Spike Duplicate Results Verification
Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 4 of 11)

Laboratory: Severn Trent

Sample Identification: JPL2-AP23(1)
SDG: 250262

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
HMX	1260	1256	0	0	925.7	935	136	136.15	134	134.33	1	1.48
RDX	905	917	0	0	930.7	940	97	97.23	98	97.51	1	1.03
1,3,5-TNB	1008	992	0	0	915.8	925	110	110.04	107	107.28	3	2.76
1,3-DNB	1024	1019	0	0	960.4	970	107	106.65	105	105.01	2	1.89
NB	1005	1001	0	0	935.6	945	107	107.38	106	105.94	1	0.94
2,4,6-TNT	1040	1029	0	0	925.7	935	112	112.34	110	110.03	2	1.80
Tetryl	1750	1654	0	0	1921	1940	91	91.12	85	85.24	7	6.82
2,4-DNT	1039	1027	0	0	940.6	950	111	110.50	108	108.09	3	2.74
2,6-DNT	2071	2046	0	0	1936	1960	107	107.00	104	104.39	3	2.84
2-AM-4,6-DNT	1008	998	0	0	905.9	915	111	111.23	109	109.08	2	1.82
4-AM-2,6-DNT	2040	2026	0	0	1931	1950	106	105.63	104	103.91	2	1.90
2-NT	2059	2038	0	0	1906	1925	108	108.00	106	105.87	2	1.87
4-NT	2073	2043	0	0	1941	1960	107	106.80	104	104.25	3	2.84
3-NT	2096	2090	0	0	1970	1990	106	106.39	105	105.03	1	0.95

Laboratory: Severn Trent

Sample Identification: JPL2-CP80(0.5)
SDG: 250274

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
HMX	83485	62368	0	0	91670	91670	D	D	D	D	D	D
RDX	167392	120152	0	0	92160	92160	D	D	D	D	D	D
1,3,5-TNB	1427	1405	367.451	367.451	906.9	906.9	117	116.84	114	114.40	3	2.60
1,3-DNB	1027	1035	0	0	951	951	108	108.02	109	108.78	1	0.92
NB	1030	1045	0	0	926.5	926.5	111	111.19	113	112.77	2	1.79
2,4,6-TNT	150216	153382	0	0	91670	91670	D	D	D	D	D	D
Tetryl	1819	1844	0	0	1902	1902	96	95.64	97	96.93	1	1.04
2,4-DNT	1273	1265	0	0	931.4	931.4	137	136.72	136	135.82	1	0.73
2,6-DNT	2134	2167	0	0	1922	1922	111	111.04	113	112.76	2	1.79
2-AM-4,6-DNT	2449	2459	1396.471	1396.471	897.1	897.1	117	117.34	118	118.45	1	0.85
4-AM-2,6-DNT	3960	3980	1914.951	1914.951	1912	1912	107	106.95	108	107.99	1	0.93
2-NT	2003	2015	0	0	1887	1887	106	106.14	107	106.77	1	0.94
4-NT	2017	2046	0	0	1922	1922	105	104.92	106	106.44	1	0.95
3-NT	2067	2049	0	0	1951	1951	106	105.93	105	105.00	1	0.95

Laboratory: Severn Trent

Sample Identification: JPL2-AP56(0.5)
SDG: 250285

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
HMX	17657	17657	0	0	9303	9303	D	D	D	D	D	D
RDX	377975	337895	0	0	93530	93530	D	D	D	D	D	D
1,3,5-TNB	6316	6320	0	0	9204	9204	D	D	D	D	D	D
1,3-DNB	1293	1285	0	0	965.2	965.2	134	133.93	133	133.16	1	0.75
NB	1232	1206	0	0	940.3	940.3	131	131.01	128	128.23	2	2.32
2,4,6-TNT	12648	12970	0	0	9303	9303	D	D	D	D	D	D
Tetryl	7736	6276	8812.238	8812.238	1930	1930	-56	-55.78	-131	-131.40	0	80.21
2,4-DNT	2133	1859	800.448	800.448	945.3	945.3	141	141.00	112	111.96	23	22.92
2,6-DNT	2879	2677	0	0	1950	1950	148	147.66	137	137.26	8	7.72
2-AM-4,6-DNT	2791	2727	1790.995	1790.995	910.4	910.4	110	109.87	103	102.76	7	6.57
4-AM-2,6-DNT	5948	5890	3912.438	3912.438	1940	1940	105	104.91	102	101.93	3	2.90
2-NT	2110	2104	0	0	1915	1915	110	110.19	110	109.85	0	0.00
4-NT	2139	2140	0	0	1950	1950	110	109.69	110	109.72	0	0.00
3-NT	2173	2153	0	0	1980	1980	110	109.74	109	108.73	1	0.91

D - diluted out due to high concentration in parent sample
SDG - sample delivery group

Table E-5

**Explosives
Matrix Spike/Matrix Spike Duplicate Results Verification
Joliet Army Ammunition Plant - SRU2 and SRU3 LAP**

(Page 5 of 11)

Laboratory: Severn Trent

Sample Identification: JPL2-AP70(0.5)
SDG: 250293

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100
(MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	9787	8799	0			0	92120	9212	D	D	D
RDX	1029	1167	0	0	926.1	926.1	111	111.14	126	125.98	13	12.66
1,3,5-TNB	1110	1125	0	0	911.3	911.3	122	121.77	123	123.47	1	0.82
1,3-DNB	1008	1025	0	0	955.7	955.7	106	105.50	107	107.21	1	0.94
NB	1035	1040	0	0	931	931	111	111.22	112	111.70	1	0.90
2,4,6-TNT	103946	99409	0	0	921200	92120	D	D	D	D	D	D
Tetryl	1613	1799	0	0	1911	1911	84	84.42	94	94.14	11	11.24
2,4-DNT	1042	66	0	0	936	936	111	111.37	114	7.08	3	2.67
2,6-DNT	2004	2065	0	0	1931	1931	104	103.80	107	106.95	3	2.84
2-AM-4,6-DNT	1542	1542	569.803	569.803	901.5	901.5	108	107.87	108	107.88	0	0.00
4-AM-2,6-DNT	2859	2748	775.271	775.271	1921	1921	108	108.49	103	102.70	5	4.74
2-NT	2026	2089	0	0	1897	1897	107	106.82	110	110.12	3	2.76
4-NT	2051	2099	0	0	1931	1931	106	106.23	109	108.70	3	2.79
3-NT	2037	2083	0	0	1961	1961	104	103.89	106	106.24	2	1.90

Laboratory: Severn Trent

Sample Identification: JPL2-AP84(0.5)
SDG: 250332

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100
(MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	6917	6102	5110.199			5110.199	930	930	194	194.32	107
RDX	1176	1267	303.532	303.532	935.3	935.3	93	93.33	103	102.96	10	10.20
1,3,5-TNB	1125	1100	0	0	920.4	920.4	122	122.23	119	119.46	2	2.49
1,3-DNB	1045	1024	0	0	965.2	965.2	108	108.29	106	106.05	2	1.87
NB	1079	1065	0	0	940.3	940.3	115	114.74	113	113.31	2	1.75
2,4,6-TNT	1451	1397	420.348	420.348	930.3	930.3	111	110.80	105	104.97	6	5.56
Tetryl	1915	1888	0	0	1930	1930	99	99.24	98	97.80	1	1.02
2,4-DNT	1227	1187	0	0	945.3	945.3	130	129.75	126	125.53	3	3.13
2,6-DNT	2100	2077	0	0	1950	1950	108	107.67	106	106.51	2	1.87
2-AM-4,6-DNT	1364	1326	0	0	910.4	910.4	150	149.78	146	145.61	3	2.70
4-AM-2,6-DNT	2445	2390	0	0	1940	1940	126	126.02	123	123.20	2	2.41
2-NT	1987	1987	0	0	1915	1915	104	103.75	104	103.74	0	0.00
4-NT	1985	1992	0	0	1950	1950	102	101.77	102	102.18	0	0.00
3-NT	2004	2003	0	0	1980	1980	101	101.22	101	101.18	0	0.00

Laboratory: Severn Trent

Sample Identification: JPL2-AP92(0.5)
SDG: 250340

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100
(MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	1536	2270	951.881			951.881	925.7	925.7	63	63.12	142
RDX	1401	3029	1527.376	1527.376	930.7	930.7	-14	-13.53	161	161.33	238	238.10
1,3,5-TNB	1502	6267	0	0	915.8	915.8	D	D	D	D	D	D
1,3-DNB	980	1158	0	0	960.4	960.4	102	102.00	121	120.58	17	17.04
NB	1054	1614	0	0	935.6	935.6	113	112.67	172	172.49	41	41.40
2,4,6-TNT	2288	22195	0	0	9257	9257	D	D	D	D	D	D
Tetryl	1696	1776	0	0	1921	1921	88	88.26	92	92.45	4	4.44
2,4-DNT	1005	1400	508.614	508.614	940.6	940.6	53	52.79	95	94.76	57	56.76
2,6-DNT	1973	2671	0	0	1936	1936	102	101.92	138	137.98	30	30.00
2-AM-4,6-DNT	1231	2745	864.851	864.851	905.9	905.9	40	40.41	207	207.50	135	135.22
4-AM-2,6-DNT	2131	2901	0	0	1931	1931	110	110.38	150	150.21	31	30.77
2-NT	1844	1988	0	0	1906	1906	97	96.76	104	104.31	7	6.97
4-NT	1853	1953	0	0	1941	1941	95	95.44	101	100.59	6	6.12
3-NT	1847	2005	0	0	1970	1970	94	93.77	102	101.75	8	8.16

D - diluted out due to high concentration in parent sample
SDG - sample delivery group

Table E-5

**Explosives
Matrix Spike/Matrix Spike Duplicate Results Verification
Joliet Army Ammunition Plant - SRU2 and SRU3 LAP**

(Page 6 of 11)

Laboratory: Severn Trent

Sample Identification: JPL2-AP94(0.5)
SDG: 250378

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) / 2 x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	45609	68589	59123.762			59123.762	46290	46290	D	D	D
RDX	9292	4300	2313.762	2313.762	9307	9307	D	D	D	D	D	D
1,3,5-TNB	1029	1033	0	0	915.8	915.8	112	112.31	113	112.76	1	0.89
1,3-DNB	1002	1004	0	0	960.4	960.4	104	104.31	105	104.54	1	0.96
NB	1018	1033	0	0	935.6	935.6	109	108.84	110	110.38	1	0.91
2,4,6-TNT	1200	1209	0	0	925.7	925.7	130	129.65	131	130.58	1	0.77
Tetryl	1881	1918	0	0	1921	1921	98	97.91	100	99.83	2	2.02
2,4-DNT	1044	1053	0	0	940.6	940.6	111	110.98	112	111.90	1	0.90
2,6-DNT	2014	2038	0	0	1936	1936	104	104.05	105	105.28	1	0.96
2-AM-4,6-DNT	1245	1226	0	0	905.9	905.9	137	137.38	135	135.39	1	1.47
4-AM-2,6-DNT	2257	2259	0	0	1931	1931	117	116.87	117	116.98	0	0.00
2-NT	1977	2011	0	0	1906	1906	104	103.71	106	105.51	2	1.90
4-NT	2065	2062	0	0	1941	1941	106	106.38	106	106.23	0	0.00
3-NT	1974	2022	0	0	1970	1970	100	100.20	103	102.66	3	2.96

Laboratory: Severn Trent

Sample Identification: JPL2-SP2(0)
SDG: 250401

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) / 2 x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	1685	1609	658.259			658.259	930.3	930.3	110	110.39	102
RDX	1010	1005	0	0	935.3	935.3	108	107.95	107	107.43	1	0.93
1,3,5-TNB	1292	1291	333.532	333.532	920.4	920.4	104	104.15	104	104.02	0	0.00
1,3-DNB	1032	1023	0	0	965.2	965.2	107	106.96	106	105.96	1	0.94
NB	1057	1030	0	0	940.3	940.3	112	112.37	110	109.54	2	1.80
2,4,6-TNT	12288	11821	9107.96	9107.96	9303	9303	D	D	D	D	D	D
Tetryl	1844	1862	0	0	1930	1930	96	95.56	96	96.47	0	0.00
2,4-DNT	1288	1260	299.701	299.701	945.3	945.3	105	104.54	102	101.63	3	2.90
2,6-DNT	2151	2115	0	0	1950	1950	110	110.31	108	108.44	2	1.83
2-AM-4,6-DNT	1379	1372	0	0	910.4	910.4	151	151.46	151	150.71	0	0.00
4-AM-2,6-DNT	2416	2387	0	0	1940	1940	125	124.55	123	123.03	2	1.61
2-NT	2056	2017	0	0	1915	1915	107	107.34	105	105.30	2	1.89
4-NT	2106	2057	0	0	1950	1950	108	108.01	105	105.50	3	2.82
3-NT	2068	2024	0	0	1980	1980	104	104.44	102	102.25	2	1.94

Laboratory: Severn Trent

Sample Identification: JPL2-SP4(1)
SDG: 250418

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) / 2 x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	1492	1519	0			0	930.3	930.3	160	160.40	163
RDX	969	959	0	0	935.3	935.3	104	103.61	103	102.57	1	0.97
1,3,5-TNB	1072	1067	0	0	920.4	920.4	116	116.49	116	115.90	0	0.00
1,3-DNB	1068	1054	0	0	965.2	965.2	111	110.63	109	109.17	2	1.82
NB	1061	1032	0	0	940.3	940.3	113	112.85	110	109.75	3	2.69
2,4,6-TNT	1143	1111	0	0	930.3	930.3	123	122.84	119	119.42	3	3.31
Tetryl	1996	1946	0	0	1930	1930	103	103.41	101	100.84	2	1.96
2,4-DNT	1113	1087	0	0	945.3	945.3	118	117.70	115	114.95	3	2.58
2,6-DNT	2195	2144	0	0	1950	1950	113	112.56	110	109.97	3	2.69
2-AM-4,6-DNT	1190	1154	0	0	910.4	910.4	131	130.72	127	126.73	3	3.10
4-AM-2,6-DNT	2243	2182	0	0	1940	1940	116	115.63	112	112.49	4	3.51
2-NT	2204	2139	0	0	1915	1915	115	115.12	112	111.70	3	2.64
4-NT	2233	2178	0	0	1950	1950	115	114.54	112	111.67	3	2.64
3-NT	2234	2168	0	0	1980	1980	113	112.84	109	109.49	4	3.60

D - diluted out due to high concentration in parent sample
SDG - sample delivery group

Table E-5

Explosives
Matrix Spike/Matrix Spike Duplicate Results Verification
Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 7 of 11)

Laboratory: Test America

Sample Identification: JPWR367-2W-7
SDG: 500-4599

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
HMX	2860	3600	2400	2400	931	931	51	49	131	129	23	22.91
RDX	3070	2650	1200	1200	935	935	195	200.0	150	155.08	15	14.69
1,3,5-TNB	2500	1330	0	0	920	920	271	271.7	144	144.57	61	61.10
1,3-DNB	1030	1030	0	0	963	963	107	107.0	107	106.96	1	0.00
NB	1410	3520	0	0	941	941	150	149.8	374	374.07	86	85.60
2,4,6-TNT	42000	27400	69000	69000	928	928	-2930	-2909.5	-4500	-4482.76	4	42.07
Tetryl	1710	1540	0	0	1930	1930	88	88.6	80	79.79	10	10.46
2,4-DNT	1140	1050	0	0	945	945	120	120.6	111	111.11	8	8.22
2,6-DNT	2130	1990	0	0	1950	1950	110	109.2	102	102.05	7	6.80
2-AM-4,6-DNT	3930	3790	2700	2700	910	910	139	135.2	124	119.78	4	3.63
4-AM-2,6-DNT	5410	5440	3100	3100	1940	1940	119	119.1	121	120.62	0	0.55
2-NT	2240	1970	0	0	1920	1920	117	116.7	103	102.60	13	12.83
4-NT	2390	1990	0	0	1950	1950	123	122.6	102	102.05	18	18.26
3-NT	2420	2050	0	0	1980	1980	122	122.2	103	103.54	17	16.55

Laboratory: Test America

Sample Identification: JPWR368-2E-13
SDG: 500-4602

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
HMX	1250	1190	0	0	931	931	135	134	128	128	5	4.92
RDX	1200	1170	380	382	935	935	87	87.7	85	84.28	2	2.53
1,3,5-TNB	937	934	270	270	920	920	73	72.5	72	72.17	0	0.32
1,3-DNB	920	936	0	0	963	963	96	95.5	97	97.20	2	1.72
NB	918	1050	0	0	941	941	98	97.6	112	111.58	14	13.41
2,4,6-TNT	1440	1890	1300	1300	928	928	19	15.1	68	63.58	27	27.03
Tetryl	1460	1670	0	0	1930	1930	75	75.6	86	86.53	13	13.42
2,4-DNT	915	923	0	0	945	945	97	96.8	98	97.67	1	0.87
2,6-DNT	1860	1880	0	0	1950	1950	96	95.4	97	96.41	1	1.07
2-AM-4,6-DNT	1330	1320	580	580	910	910	82	82.4	81	81.32	1	0.75
4-AM-2,6-DNT	2270	2320	680	680	1940	1940	82	82.0	85	84.54	2	2.18
2-NT	1820	1850	0	0	1920	1920	95	94.8	97	96.35	2	1.63
4-NT	1850	1880	0	0	1950	1950	95	94.9	96	96.41	2	1.61
3-NT	1830	1860	0	0	1980	1980	92	92.4	94	93.94	2	1.63

Laboratory: Test America

Sample Identification: JPWR-369-1W-10
SDG: 500-4661

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
HMX	1040	1080	0	0	936	936	111	111	115	115	4	3.77
RDX	915	935	0	0	940	940	97	97.3	99	99.47	2	2.16
1,3,5-TNB	902	895	0	0	925	925	98	97.5	97	96.76	1	0.78
1,3-DNB	893	892	0	0	968	968	92	92.3	92	92.15	0	0.11
NB	949	1020	0	0	945	945	100	100.4	108	107.94	7	7.21
2,4,6-TNT	1260	1420	380	380	933	933	94	94.3	112	111.47	12	11.94
Tetryl	1360	1020	0	0	1940	1940	70	70.1	53	52.58	28	28.57
2,4-DNT	885	878	0	0	950	950	93	93.2	92	92.42	1	0.79
2,6-DNT	1810	1800	0	0	1960	1960	93	92.3	92	91.84	1	0.55
2-AM-4,6-DNT	1170	1380	600	600	915	915	63	62.3	85	85.25	16	16.47
4-AM-2,6-DNT	2000	2180	0	0	1950	1950	102	102.6	112	111.79	9	8.61
2-NT	1750	1760	0	0	1930	1930	91	90.7	91	91.19	1	0.57
4-NT	1790	1780	0	0	1960	1960	91	91.3	91	90.82	1	0.56
3-NT	1780	1760	0	0	1990	1990	90	89.4	89	88.44	1	1.13

D - diluted out due to high concentration in parent sample
SDG - sample delivery group

Table E-5

Explosives
Matrix Spike/Matrix Spike Duplicate Results Verification
Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 8 of 11)

Laboratory: Test America

Sample Identification: JPWR370-1E-3
SDG: 500-4662

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	HMX	1100	1100	0			0	931	931	121	118	122
RDX	1000	1000	0	0	935	935	110	107.0	110	106.95	0	0.00
1,3,5-TNB	1000	980	0	0	920	920	109	108.7	107	106.52	2	2.02
1,3-DNB	980	980	0	0	963	963	102	101.8	102	101.77	0	0.00
NB	1000	1000	0	0	941	941	106	106.3	106	106.27	0	0.00
2,4,6-TNT	7700	10000	24000	24000	928	928	-1720	-1756.5	-1470	-1508.62	26	25.99
Tetryl	1500	1200	0	0	1930	1930	77	77.7	65	62.18	17	22.22
2,4-DNT	1000	1000	0	0	945	945	108	105.8	106	105.82	2	0.00
2,6-DNT	2000	1900	0	0	1950	1950	100	102.6	99	97.44	1	5.13
2-AM-4,6-DNT	1700	1400	0	0	910	910	188	186.8	155	153.85	19	19.35
4-AM-2,6-DNT	2400	2200	0	0	1940	1940	125	123.7	116	113.40	7	8.70
2-NT	2000	1900	0	0	1920	1920	103	104.2	101	98.96	2	5.13
4-NT	2000	1900	0	0	1950	1950	101	102.6	99	97.44	2	5.13
3-NT	2000	2000	0	0	1980	1980	103	101.0	102	101.01	1	0.00

Laboratory: Test America

Sample Identification: JPL3-GENFILL
SDG: 500-5635

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	4-AM-2,6-DNT	2330	2350	0			0	1930	1930	121	120.7	122
2-AM-4,6-DNT	1540	1580	500	500	906	906	115	114.8	119	119.21	2	2.56
1,3-DNB	962	965	0	0	958	958	100	100.4	101	100.73	0	0.31
2,4-DNT	955	965	0	0	941	941	102	101.5	103	102.55	1	1.04
2,6-DNT	1820	1840	0	0	1940	1940	94	93.8	95	94.85	2	1.09
HMX	985	968	0	0	927	927	106	106	104	104	2	1.74
NB	990	964	0	0	937	937	106	105.7	103	102.88	3	2.66
2-NT	1890	1840	0	0	1910	1910	99	99.0	97	96.34	3	2.68
3-NT	1960	1980	0	0	1970	1970	99	99.5	100	100.51	1	1.02
4-NT	1950	1900	0	0	1940	1940	100	100.5	98	97.94	3	2.60
RDX	1070	1020	0	0	931	931	115	114.9	110	109.56	5	4.78
Tetryl	1410	1560	0	0	1920	1920	74	73.4	81	81.25	10	10.10
1,3,5-TNB	914	929	0	0	916	916	100	99.8	101	101.42	2	1.63
2,4,6-TNT	1140	1100	350	350	924	924	85	85.5	80	81.17	4	3.57

Laboratory: Test America

Sample Identification: JPL3-Blast Pit (2)
SDG: 500-5681

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	4-AM-2,6-DNT	2000	2010	0			0	1950	1950	102	102.6	103
2-AM-4,6-DNT	1010	1030	0	0	915	915	111	110.4	113	112.57	2	1.96
1,3-DNB	944	971	0	0	968	968	98	97.5	100	100.31	3	2.82
2,4-DNT	1000	957	0	0	950	950	105	105.3	101	100.74	5	4.39
2,6-DNT	1960	1900	0	0	1960	1960	100	100.0	97	96.94	3	3.11
HMX	962	1060	0	0	936	936	103	103	113	113	10	9.69
NB	961	969	0	0	946	946	102	101.6	102	102.43	1	0.83
2-NT	1980	1880	0	0	1930	1930	103	102.6	98	97.41	5	5.18
3-NT	2020	1880	0	0	1990	1990	102	101.5	95	94.47	7	7.18
4-NT	1980	1880	0	0	1960	1960	101	101.0	96	95.92	5	5.18
RDX	875	972	0	0	940	940	93	93.1	103	103.40	10	10.50
Tetryl	1820	1790	0	0	1940	1940	93	93.8	92	92.27	1	1.66
1,3,5-TNB	966	978	0	0	925	925	104	104.4	106	105.73	1	1.23
2,4,6-TNT	1260	1220	280	280	933	933	104	105.0	101	100.75	3	3.23

D - diluted out due to high concentration in parent sample
SDG - sample delivery group

Table E-5

**Explosives
Matrix Spike/Matrix Spike Duplicate Results Verification
Joliet Army Ammunition Plant - SRU2 and SRU3 LAP**

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Laboratory: Test America

Sample Identification: JPL3-STOCKPILE-1(0)
SDG: 500-5719

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) / 2 x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
4-AM-2,6-DNT	1850	1900	0	0	1940	1940	95	95.4	98	97.94	3	2.67
2-AM-4,6-DNT	1020	1060	0	0	910	910	113	112.1	116	116.48	3	3.85
1,3-DNB	920	927	0	0	963	963	96	95.5	96	96.26	1	0.76
2,4-DNT	999	1010	0	0	945	945	106	105.7	107	106.88	1	1.10
2,6-DNT	1910	1920	0	0	1950	1950	98	97.9	98	98.46	0	0.52
HMX	1120	1140	0	0	931	931	120	120	122	122	1	1.77
NB	949	967	0	0	941	941	101	100.9	103	102.76	2	1.88
2-NT	1870	1850	0	0	1920	1920	97	97.4	97	96.35	1	1.08
3-NT	1970	1960	0	0	1980	1980	99	99.5	99	99.99	1	0.51
4-NT	1890	1860	0	0	1950	1950	97	96.9	95	95.38	2	1.60
RDX	1530	1520	270	270	935	935	134	134.8	134	133.69	0	0.66
Tetryl	1720	1730	0	0	1930	1930	89	89.1	89	89.64	1	0.58
1,3,5-TNB	1010	996	0	0	920	920	109	109.8	108	108.26	1	1.40
2,4,6-TNT	1570	1830	430	430	928	928	123	122.8	151	150.86	15	15.29

Laboratory: Test America

Sample Identification: JPL3-AF22(1)
SDG: 500-6650

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) / 2 x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
4-AM-2,6-DNT	2090	2080	0	0	1920	1920	109	108.9	108	108.33	1	0.48
2-AM-4,6-DNT	1040	1040	0	0	901	901	115	115.4	116	115.43	0	0.00
1,3-DNB	1030	1020	0	0	954	954	108	108.0	107	106.92	1	0.98
2,4-DNT	1060	1070	0	0	936	936	113	113.2	115	114.32	1	0.94
2,6-DNT	2050	2050	0	0	1930	1930	106	106.2	107	106.22	0	0.00
HMX	1030	1020	0	0	922	922	112	112	110	111	1	0.98
NB	1020	1000	0	0	932	932	109	109.4	108	107.30	1	1.98
2-NT	2040	2060	0	0	1900	1900	108	107.4	109	108.42	1	0.98
3-NT	2150	2140	0	0	1960	1960	109	109.7	109	109.18	0	0.47
4-NT	2060	2080	0	0	1930	1930	107	106.7	108	107.77	1	0.97
RDX	945	942	0	0	926	926	102	102.1	102	101.73	0	0.32
Tetryl	1900	1870	0	0	1910	1910	99	99.5	98	97.91	2	1.59
1,3,5-TNB	1030	1030	0	0	911	911	113	113.1	113	113.06	0	0.00
2,4,6-TNT	1010	998	0	0	919	919	110	109.9	109	108.60	1	1.20

Laboratory: Test America

Sample Identification: JPL3-AP32(0.5)
SDG: 500-6714

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) / 2 x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
4-AM-2,6-DNT	2330	2340	0	0	1940	1940	120	120.1	121	120.62	0	0.43
2-AM-4,6-DNT	1090	1090	0	0	910	910	120	119.8	120	119.78	0	0.00
1,3-DNB	1090	1080	0	0	963	963	113	113.2	112	112.15	1	0.92
2,4-DNT	1110	1110	0	0	945	945	118	117.5	117	117.46	0	0.00
2,6-DNT	2170	2170	0	0	1950	1950	111	111.3	111	111.28	0	0.00
HMX	1200	1170	0	0	931	931	129	129	126	126	2	2.53
NB	1040	1030	0	0	941	941	111	110.5	109	109.46	2	0.97
2-NT	2110	2130	0	0	1920	1920	110	109.9	111	110.94	1	0.94
3-NT	2190	2190	0	0	1980	1980	111	110.6	110	110.61	0	0.00
4-NT	2100	2110	0	0	1950	1950	108	107.7	108	108.21	0	0.48
RDX	1020	1020	0	0	935	935	109	109.1	109	109.09	0	0.00
Tetryl	1800	1780	0	0	1930	1930	93	93.3	92	92.23	1	1.12
1,3,5-TNB	1080	1080	0	0	920	920	117	117.4	117	117.39	0	0.00
2,4,6-TNT	1080	1080	0	0	928	928	117	116.4	117	116.38	0	0.00

D - diluted out due to high concentration in parent sample
SDG - sample delivery group

Table E-5

Explosives
Matrix Spike/Matrix Spike Duplicate Results Verification
Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America

Sample Identification: JPL2-CP95(0.5)
SDG: 500-6900

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100 / (MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
4-AM-2,6-DNT	2140	2150	0	0	1940	1940	110	110.3	111	110.82	0	0.47
2-AM-4,6-DNT	1090	1080	0	0	910	910	119	119.8	119	118.68	0	0.92
1,3-DNB	980	984	0	0	963	963	102	101.8	102	102.18	0	0.41
2,4-DNT	1080	1060	0	0	945	945	114	114.3	112	112.17	2	1.87
2,6-DNT	1960	1950	0	0	1950	1950	100	100.5	100	100.00	1	0.51
HMX	7330	6040	7100	7100	931	931	28	25	-110	-114	19	19.30
NB	973	998	0	0	941	941	103	103.4	106	106.06	3	2.54
2-NT	1930	1930	0	0	1920	1920	101	100.5	101	100.52	0	0.00
3-NT	1940	1950	0	0	1980	1980	98	98.0	98	98.48	1	0.51
4-NT	1940	1950	0	0	1950	1950	100	99.5	100	100.00	0	0.51
RDX	3180	3170	3000	3000	935	935	23	19.3	22	18.18	0	0.31
Tetryl	1570	1600	0	0	1930	1930	81	81.3	83	82.90	2	1.89
1,3,5-TNB	1240	1190	260	260	920	920	107	106.5	101	101.09	4	4.12
2,4,6-TNT	5590	6040	0	0	928	928	602	602.4	650	650.86	8	7.74

Laboratory: Test America

Sample Identification: JPL3-SP3(0.5)
SDG: 500-7047

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100 / (MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
4-AM-2,6-DNT	2100	2110	0	0	1930	1930	109	108.8	110	109.33	1	0.48
2-AM-4,6-DNT	987	989	0	0	906	906	109	108.9	109	109.16	0	0.20
1,3-DNB	971	969	0	0	958	958	101	101.4	101	101.15	0	0.21
2,4-DNT	1010	1030	0	0	941	941	107	107.3	109	109.46	2	1.96
2,6-DNT	1920	1960	0	0	1940	1940	99	99.0	101	101.03	2	2.06
HMX	989	985	0	0	927	927	107	107	106	106	0	0.41
NB	972	977	0	0	937	937	104	103.7	104	104.27	0	0.51
2-NT	1960	1990	0	0	1910	1910	103	102.6	104	104.19	2	1.52
3-NT	1990	2030	0	0	1970	1970	101	101.0	103	103.05	2	1.99
4-NT	1980	1990	0	0	1940	1940	102	102.1	103	102.58	1	0.50
RDX	910	890	0	0	931	931	98	97.7	96	95.60	2	2.22
Tetryl	1590	1580	0	0	1920	1920	83	82.8	82	82.29	1	0.63
1,3,5-TNB	985	997	0	0	916	916	108	107.5	109	108.84	1	1.21
2,4,6-TNT	2280	967	0	0	924	924	247	246.8	105	104.65	81	80.87

Laboratory: Test America

Sample Identification: JP-BorrowSource Clay 1
SDG: 500-7048

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100 / (MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
4-AM-2,6-DNT	2220	2210	0	0	1940	1940	114	114.4	114	113.92	0	0.45
2-AM-4,6-DNT	1060	1060	0	0	910	910	116	116.5	117	116.48	0	0.00
1,3-DNB	1050	1060	0	0	963	963	109	109.0	110	110.07	1	0.95
2,4-DNT	1110	1100	0	0	945	945	117	117.5	117	116.40	0	0.90
2,6-DNT	2160	2160	0	0	1950	1950	111	110.8	111	110.77	0	0.00
HMX	1050	1060	0	0	931	931	113	113	114	114	1	0.95
NB	1020	1030	0	0	941	941	108	108.4	109	109.46	1	0.98
2-NT	2100	2090	0	0	1920	1920	110	109.4	109	108.85	1	0.48
3-NT	2180	2170	0	0	1980	1980	110	110.1	109	109.60	1	0.46
4-NT	2100	2070	0	0	1950	1950	108	107.7	106	106.15	1	1.44
RDX	946	950	0	0	935	935	101	101.2	102	101.60	1	0.42
Tetryl	1510	1540	0	0	1930	1930	78	78.2	80	79.79	2	1.97
1,3,5-TNB	1010	1010	0	0	920	920	109	109.8	109	109.78	0	0.00
2,4,6-TNT	964	963	0	0	928	928	104	103.9	104	103.77	0	0.10

D - diluted out due to high concentration in parent sample
SDG - sample delivery group

Table E-5

Explosives
Matrix Spike/Matrix Spike Duplicate Results Verification
 Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

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Laboratory: Test America

Sample Identification: JPL3-SP3(0.5)
 SDG: 500-7145

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
 SC = Sample Result
 SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100
 (MS + MSD) / 2

Where: MS = matrix spike result
 MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	4-AM-2,6-DNT	2160	2140	0			0	1950	1940	111	110.8	110
2-AM-4,6-DNT	1060	1050	0	0	915	910	116	115.8	115	115.38	2	0.95
1,3-DNB	1070	1050	0	0	968	963	110	110.5	109	109.03	2	1.89
2,4-DNT	1100	1080	0	0	950	945	116	115.8	114	114.29	2	1.83
2,6-DNT	2170	2130	0	0	1960	1950	111	110.7	109	109.23	2	1.86
HMX	1090	1070	0	0	936	931	117	116	115	115	2	1.85
NB	1030	1020	0	0	946	941	109	108.9	108	108.40	1	0.98
2-NT	2140	2090	0	0	1930	1920	111	110.9	109	108.85	2	2.36
3-NT	2240	2180	0	0	1990	1980	112	112.6	110	110.10	3	2.71
4-NT	2140	2100	0	0	1960	1950	109	109.2	107	107.69	2	1.89
RDX	988	962	0	0	940	935	105	105.1	103	102.89	3	2.67
Tetryl	2080	2000	0	0	1940	1930	107	107.2	104	103.63	4	3.92
1,3,5-TNB	1090	1070	0	0	925	920	118	117.8	116	116.30	2	1.85
2,4,6-TNT	1100	1080	0	0	933	928	118	117.9	116	116.38	2	1.83

APPENDIX F

VALIDATION VERIFICATION WORKSHEETS-PAH/PCN

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 7/7/2006SDG: 247532

$$RF = \frac{As \cdot Cis}{Ais \cdot Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--	9.81	--	9.813
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	82808	961916	8	0.68869		0.68869	
	Level 4	2	288818	1170203	8	0.98724		0.98724	
	Level 5	5	605437	1169167	8	0.82854		0.82854	
	Level 6	10	1291255	1106020	8	0.93398		0.93398	
	Level 7	20	2786263	1193227	8	0.93403		0.93403	
	Level 8	40	6214609	1344940	8	0.92415		0.92415	
	Level 9	50	7080171	1292802	8	0.87626		0.87626	
	Level 10	70	10897739	1420463	8	0.87680		0.87680	
	Level 11	80	13444706	1579821	8	0.85103		0.85103	
Average RF						0.87786		0.87786	
Acenaphthylene	Level 1	0.1	--	--	8	--	7.73	--	7.72806
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	165551	602663	8	2.19759		2.19759	
	Level 4	2	329254	662868	8	1.98685		1.98685	
	Level 5	5	646815	574498	8	1.80141		1.80141	
	Level 6	10	1350891	564436	8	1.91468		1.91468	
	Level 7	20	2956166	601321	8	1.96645		1.96645	
	Level 8	40	6604697	695664	8	1.89882		1.89882	
	Level 9	50	7689499	666039	8	1.84722		1.84722	
	Level 10	70	11422618	759211	8	1.71947		1.71947	
	Level 11	80	15137034	870804	8	1.73828		1.73828	
Average RF						1.89675		1.89675	
Acenaphthene	Level 1	0.1	--	--	8	--	8.00	--	7.99811
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	95273	602663	8	1.26469		1.26469	
	Level 4	2	173743	662868	8	1.04843		1.04843	
	Level 5	5	366395	574498	8	1.02042		1.02042	
	Level 6	10	735668	564436	8	1.04269		1.04269	
	Level 7	20	1585125	601321	8	1.05443		1.05443	
	Level 8	40	3636214	695664	8	1.04539		1.04529	
	Level 9	50	4275854	666039	8	1.02717		1.02717	
	Level 10	70	6500278	759211	8	0.97850		0.97850	
	Level 11	80	8593764	870804	8	0.98688		0.98688	
Average RF						1.05207		1.05207	
Fluorene	Level 1	0.1	--	--	8	--	4.75	--	LR r ² =0.99898
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	NR	602663	8	--		--	
	Level 4	2	234254	662868	8	1.41358		--	
	Level 5	5	459476	574498	8	1.27966		--	
	Level 6	10	928640	564436	8	1.31620		--	
	Level 7	20	1982787	601321	8	1.31895		--	
	Level 8	40	4410723	695664	8	1.26806		--	
	Level 9	50	5319312	666039	8	1.27784		--	
	Level 10	70	8239072	759211	8	1.24025		--	
	Level 11	80	10544764	870804	8	1.21092		--	
Average RF						1.29068		--	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	12.64	--	12.64
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	96859	672180	8	1.15277		1.15277	
	Level 4	2	241270	923129	8	1.04544		1.04543	
	Level 5	5	467593	894353	8	0.83653		0.83653	
	Level 6	10	1020729	900167	8	0.90715		0.90715	
	Level 7	20	2401505	923120	8	1.04060		1.0406	
	Level 8	40	5674309	1035048	8	1.09643		1.09643	
	Level 9	50	6986293	1014232	8	1.10212		1.10212	
	Level 10	70	11125830	1166419	8	1.09011		1.09011	
	Level 11	80	16557190	1272551	8	1.30110		1.3011	
Average RF						1.06358		1.06358	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	11.49	--	11.49
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	111852	672180	8	1.33121		1.33121	
	Level 4	2	359725	923129	8	1.55872		1.5587	
	Level 5	5	631574	894353	8	1.12989		1.12989	
	Level 6	10	1527162	900167	8	1.35723		1.35723	
	Level 7	20	2850069	923120	8	1.23497		1.23497	
	Level 8	40	6275790	1035048	8	1.21266		1.21266	
	Level 9	50	7714823	1014232	8	1.21705		1.21705	
	Level 10	70	11708039	1166419	8	1.14715		1.14715	
	Level 11	80	13898969	1272551	8	1.09221		1.09221	
Average RF						1.25345			
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	19.71	--	LR r ² =0.99189
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	152364	672180	8	1.81337		--	
	Level 4	2	364986	923129	8	1.58152		--	
	Level 5	5	624476	894353	8	1.11719		--	
	Level 6	10	1349815	900167	8	1.19961		--	
	Level 7	20	2790324	923120	8	1.20908		--	
	Level 8	40	6004942	1035048	8	1.16032		--	
	Level 9	50	7818533	1014232	8	1.23341		--	
	Level 10	70	11632792	1166419	8	1.13978		--	
	Level 11	80	13237113	1272551	8	1.04020		--	
Average RF						1.27717		--	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	11.07	--	11.07
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	193627	931442	8	1.66303		1.66303	
	Level 4	2	402716	1022122	8	1.57600		1.576	
	Level 5	5	674528	829266	8	1.30145		1.30145	
	Level 6	10	1442593	852928	8	1.35307		1.35307	
	Level 7	20	2938759	854009	8	1.37645		1.37645	
	Level 8	40	6320609	888922	8	1.42208		1.42208	
	Level 9	50	8153168	927930	8	1.40582		1.40582	
	Level 10	70	11782141	1087541	8	1.23814		1.23814	
	Level 11	80	14530685	1237591	8	1.17411		1.17411	
Average RF						1.39002		1.39	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	16.39	--	LR r ² =99324
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	90030	931442	8	0.77325		--	
	Level 4	2	247131	1022122	8	0.96713		--	
	Level 5	5	451203	829266	8	0.87056		--	
	Level 6	10	1147791	852928	8	1.07657		--	
	Level 7	20	2314897	854009	8	1.08425		--	
	Level 8	40	5371113	888922	8	1.20846		--	
	Level 9	50	6666352	927930	8	1.14946		--	
	Level 10	70	11357662	1087541	8	1.19354		--	
	Level 11	80	16467952	1237591	8	1.33065		--	
Average RF						1.07265	--	--	--

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	22.50	--	LR r ² =0.99438
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	NR	931442	8	--		--	
	Level 4	2	486542	1022122	8	1.90405		--	
	Level 5	5	778997	829266	8	1.50301		--	
	Level 6	10	1398056	852928	8	1.31130		--	
	Level 7	20	3131958	854009	8	1.46694		--	
	Level 8	40	5111789	888922	8	1.15011		--	
	Level 9	50	6615744	927930	8	1.14073		--	
	Level 10	70	10513293	1087541	8	1.10480		--	
	Level 11	80	12153312	1237591	8	0.98201		--	
Average RF						1.32037	--	--	--

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	24.12	--	LR r ² =0.99180
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	91736	931442	8	0.78791		--	
	Level 4	2	217364	1022122	8	0.85064		--	
	Level 5	5	357548	829266	8	0.68986		--	
	Level 6	10	1043584	852928	8	0.97882		--	
	Level 7	20	2028571	854009	8	0.95014		--	
	Level 8	40	5741097	888922	8	1.29170		--	
	Level 9	50	6089804	927930	8	1.05005		--	
	Level 10	70	13937976	1087541	8	1.46469		--	
	Level 11	80	12153312	1237591	8	0.98201		--	
Average RF						1.00509	--	--	--

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	27.08	--	LR r ² =99457
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	241033	705499	8	2.73319		--	
	Level 4	2	531055	753443	8	2.81935		--	
	Level 5	5	753522	532126	8	2.26569		--	
	Level 6	10	1636046	607903	8	2.15304		--	
	Level 7	20	3199119	553193	8	2.31320		--	
	Level 8	40	5860786	658578	8	1.77983		--	
	Level 9	50	7833913	631934	8	1.98348		--	
	Level 10	70	9447385	1087541	8	0.99279		--	
	Level 11	80	--	--	8	--		--	
Average RF						2.13007	--	--	--

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Benzo (a) pyrene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	183105	705499	8	2.07632	13.73	2.07632	13.73		
	Level 4	2	328469	753443	8	1.74383		1.74382			
	Level 5	5	486523	532126	8	1.46288		1.46288			
	Level 6	10	1200144	607903	8	1.57939		1.57939			
	Level 7	20	2274150	553193	8	1.64438		1.64438			
	Level 8	40	5073603	658578	8	1.54078		1.54087			
	Level 9	50	6224048	631934	8	1.57587		1.57587			
	Level 10	70	11008372	846796	8	1.48572		1.48552			
	Level 11	80	13647598	1063158	8	1.28368		1.28368			
Average RF						1.59921				1.59918	

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	201128	705499	8	2.28069	14.21	2.28069	14.21		
	Level 4	2	406852	753443	8	2.15996		2.15995			
	Level 5	5	472064	532126	8	1.41941		1.41941			
	Level 6	10	1334733	607903	8	1.75651		1.75651			
	Level 7	20	2562094	553193	8	1.85259		1.85259			
	Level 8	40	5643587	658578	8	1.71387		1.71387			
	Level 9	50	6954981	631934	8	1.76094		1.76094			
	Level 10	70	12408563	846796	8	1.67469		1.67469			
	Level 11	80	18609582	1063158	8	1.75041		1.75041			
Average RF						1.81878				1.81878	

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	135899	705499	8	1.54103	9.37	1.54103	9.37		
	Level 4	2	291898	753443	8	1.54968		1.54967			
	Level 5	5	366342	532126	8	1.10152		1.10152			
	Level 6	10	1039805	607903	8	1.36838		1.36838			
	Level 7	20	2038956	553193	8	1.47432		1.47432			
	Level 8	40	4614117	658578	8	1.40124		1.40124			
	Level 9	50	5733976	631934	8	1.45179		1.45179			
	Level 10	70	10365328	846796	8	1.39893		1.39893			
	Level 11	80	15342150	1063158	8	1.44307		1.44307			
Average RF						1.41444				1.4144	

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	143743	705499	8	1.62997	10.11	1.62997	10.11		
	Level 4	2	335116	753443	8	1.77912		1.99712			
	Level 5	5	402210	532126	8	1.20937		1.20937			
	Level 6	10	1095985	607903	8	1.44232		1.44232			
	Level 7	20	2066181	553193	8	1.49400		1.494			
	Level 8	40	5047437	658578	8	1.53283		1.53283			
	Level 9	50	6025279	631934	8	1.52555		1.52555			
	Level 10	70	10822442	846796	8	1.46062		1.46062			
	Level 11	80	15794302	1063158	8	1.48560		1.4856			
Average RF						1.50660				1.5066	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 7/12/2006

SDG: 247700

RF = $\frac{As \cdot Cis}{Ais \cdot Cs}$ where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Naphthalene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	152814	1048546	8	1.16591	12.64	1.16591	12.64		
	Level 4	2	288912	1051368	8	1.09919		1.09919			
	Level 5	5	590821	1085960	8	0.87049		0.87049			
	Level 6	10	1328795	1173004	8	0.90625		0.90625			
	Level 7	20	2756705	1209204	8	0.91191		0.91191			
	Level 8	40	5203058	1194133	8	0.87144		0.87144			
	Level 9	50	6084414	1158776	8	0.84012		0.84012			
	Level 10	70	7496575	997829	8	0.85862		0.85862			
	Level 11	80	9685401	1132229	8	0.85543		0.85543			
Average RF						0.93104				0.93104	
Acenaphthylene	Level 1	0.1	--	--	8	--				--	
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	159222	549206	8	2.31930	11.48	2.1393	11.48		
	Level 4	2	298170	558026	8	2.13732		2.13732			
	Level 5	5	640073	575612	8	1.77918		1.77918			
	Level 6	10	1437015	622662	8	1.84629		1.84629			
	Level 7	20	2987871	653739	8	1.82817		1.82818			
	Level 8	40	5538257	608295	8	1.82091		1.82091			
	Level 9	50	6639372	619576	8	1.71456		1.71456			
	Level 10	70	8046740	545439	8	1.68603		1.68603			
	Level 11	80	10394862	606961	8	1.71261		1.71261			
Average RF						1.87160				1.8716	
Acenaphthene	Level 1	0.1	--	--	8	--				--	
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	88770	549206	8	1.29307	12.53	1.29307	12.53		
	Level 4	2	159328	558026	8	1.14208		1.14208			
	Level 5	5	344626	575612	8	0.95794		0.95794			
	Level 6	10	752352	622662	8	0.96663		0.96663			
	Level 7	20	1614814	653739	8	0.98805		0.98805			
	Level 8	40	2980016	608295	8	0.97979		0.97979			
	Level 9	50	3557394	619576	8	0.91867		0.91867			
	Level 10	70	4381378	545439	8	0.91803		0.91803			
	Level 11	80	5596904	606961	8	0.92212		0.92212			
Average RF						1.00960				1.0096	
Fluorene	Level 1	0.1	--	--	8	--				--	
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	107939	549206	8	1.57229	11.66	1.572229	11.66		
	Level 4	2	193791	558026	8	1.38912		1.38912			
	Level 5	5	422384	575612	8	1.17408		1.17408			
	Level 6	10	938133	622662	8	1.20532		1.20532			
	Level 7	20	2000998	653739	8	1.22434		1.22435			
	Level 8	40	3675420	608295	8	1.20843		1.20843			
	Level 9	50	4453780	619576	8	1.15015		1.15025			
	Level 10	70	5439596	545439	8	1.13976		1.13976			
	Level 11	80	6887761	606961	8	1.13479		1.13479			
Average RF						1.24425				1.24425	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Phenanthrene	Level 1	0.1	--	--	8						
	Level 2	0.5	--	--	8						
	Level 3	1	141820	831025	8	1.36525	8.77	1.36525	8.77		
	Level 4	2	279674	842577	8	1.32771		1.32771			
	Level 5	5	592548	879812	8	1.07759		1.07759			
	Level 6	10	1326167	954188	8	1.11187		1.11187			
	Level 7	20	3073000	1053536	8	1.16674		1.16674			
	Level 8	40	5503861	951124	8	1.15734		1.15734			
	Level 9	50	6888390	923157	8	1.19388		1.19388			
	Level 10	70	7925383	851942	8	1.06317		1.06317			
	Level 11	80	10608707	908489	8	1.16773		1.16773			
Average RF						1.18125				1.18125	
Anthracene	Level 1	0.1	--	--	8						
	Level 2	0.5	--	--	8						
	Level 3	1	143310	831025	8	1.37960	12.77	1.3796	12.77		
	Level 4	2	276743	842577	8	1.31379		1.31379			
	Level 5	5	586519	879812	8	1.06663		1.06663			
	Level 6	10	1392708	954188	8	1.16766		1.16766			
	Level 7	20	2675075	1053536	8	1.01566		1.01566			
	Level 8	40	4905666	951124	8	1.03155		1.03155			
	Level 9	50	5726817	923157	8	0.99256		0.99256			
	Level 10	70	7849316	851942	8	1.05296		1.05296			
	Level 11	80	9150013	908489	8	1.00717		1.00717			
Average RF						1.11418				1.11416	
Fluoranthene	Level 1	0.1	--	--	8						
	Level 2	0.5	--	--	8						
	Level 3	1	154159	831025	8	1.48404	9.68	1.48404	9.68		
	Level 4	2	288722	842577	8	1.37066		1.37066			
	Level 5	5	654118	879812	8	1.18956		1.18956			
	Level 6	10	1493761	954188	8	1.25238		1.25238			
	Level 7	20	3126338	1053536	8	1.18699		1.18699			
	Level 8	40	5562278	951124	8	1.16962		1.16962			
	Level 9	50	6720583	923157	8	1.16480		1.1648			
	Level 10	70	8710922	851942	8	1.16855		1.16855			
	Level 11	80	10099609	908489	8	1.11169		1.1169			
Average RF						1.23314				1.23314	
Pyrene	Level 1	0.1	--	--	8						
	Level 2	0.5	--	--	8						
	Level 3	1	170303	768579	8	1.77265	12.69	1.77265	12.69		
	Level 4	2	321258	789252	8	1.62816		1.62816			
	Level 5	5	693880	846925	8	1.31087		1.31087			
	Level 6	10	1567617	969420	8	1.29365		1.29365			
	Level 7	20	3313538	1031197	8	1.28532		1.28532			
	Level 8	40	5810633	878288	8	1.32317		1.32326			
	Level 9	50	7078193	841641	8	1.34560		1.3456			
	Level 10	70	9025596	720110	8	1.43242		1.43242			
	Level 11	80	--	--	8						
Average RF						1.42398				1.42399	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8		14.52	LR	r ² =0.99328
	Level 2	0.5	--	--	8				
	Level 3	1	174630	768579	8	1.81769			
	Level 4	2	275057	789252	8	1.39401			
	Level 5	5	634905	846925	8	1.19945			
	Level 6	10	1414985	969420	8	1.16770			
	Level 7	20	3574224	1031197	8	1.38644			
	Level 8	40	6098347	878288	8	1.38869			
	Level 9	50	6448538	841641	8	1.22590			
	Level 10	70	7759384	720110	8	1.23146			
	Level 11	80	10604259	762575	8	1.39059			
Average RF						1.35577			
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8		13.40	13.4	
	Level 2	0.5	--	--	8				
	Level 3	1	152418	768579	8	1.58649			
	Level 4	2	279876	789252	8	1.41844			
	Level 5	5	603321	846925	8	1.13979			
	Level 6	10	1511206	969420	8	1.24710			
	Level 7	20	3067511	1031197	8	1.18988			
	Level 8	40	5123372	878288	8	1.16667			
	Level 9	50	6069381	841641	8	1.15382			
	Level 10	70	7223829	720110	8	1.14646			
	Level 11	80	8072629	762575	8	1.05860			
Average RF						1.23414		1.23414	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8		8.00	8	
	Level 2	0.5	--	--	8				
	Level 3	1	139163	534659	8	2.08227			
	Level 4	2	264213	547736	8	1.92949			
	Level 5	5	577463	582229	8	1.58690			
	Level 6	10	1563161	669371	8	1.86821			
	Level 7	20	3701159	766691	8	1.93098			
	Level 8	40	5297100	638369	8	1.65957			
	Level 9	50	7173966	616757	8	1.86108			
	Level 10	70	7294411	448593	8	1.85836			
	Level 11	80	10216292	563729	8	1.81227			
Average RF						1.84324		1.84324	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8		11.55	11.55	
	Level 2	0.5	--	--	8				
	Level 3	1	154527	534659	8	2.31216			
	Level 4	2	264213	547736	8	1.92949			
	Level 5	5	684587	582229	8	1.88129			
	Level 6	10	1518559	669371	8	1.81491			
	Level 7	20	3135453	766691	8	1.63584			
	Level 8	40	6034098	638369	8	1.89047			
	Level 9	50	6305410	616757	8	1.63576			
	Level 10	70	7045311	448593	8	1.79490			
	Level 11	80	9254695	563729	8	1.64169			
Average RF						1.83739		1.83739	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Benzo (a) pyrene	Level 1	0.1		--	8	--					
	Level 2	0.5		--	8	--					
	Level 3	1	128834	534659	8	1.92772	9.97	1.92772	9.967		
	Level 4	2	249159	547736	8	1.81956		1.81956			
	Level 5	5	535924	582229	8	1.47275		1.47275			
	Level 6	10	1298419	669371	8	1.55181		1.55181			
	Level 7	20	2938312	766691	8	1.53298		1.53298			
	Level 8	40	4867188	638369	8	1.52488		1.52488			
	Level 9	50	5854062	616757	8	1.51867		1.51867			
	Level 10	70	5987170	448593	8	1.52532		1.52532			
	Level 11	80	8548021	563729	8	1.51634		1.51634			
Average RF						1.59889				1.63979	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Indeno (1,2,3-cd) pyrene	Level 1	0.1		--	8	--					
	Level 2	0.5		--	8	--					
	Level 3	1	146407	534659	8	2.19066	10.09	2.19066	10.091		
	Level 4	2	295949	547736	8	2.16125		2.16125			
	Level 5	5	640503	582229	8	1.76014		1.76014			
	Level 6	10	1503423	669371	8	1.79682		1.79682			
	Level 7	20	3404299	766691	8	1.77610		1.77610			
	Level 8	40	5818669	638369	8	1.82298		1.82298			
	Level 9	50	6886486	616757	8	1.78650		1.78650			
	Level 10	70	6434551	448593	8	1.63930		1.63930			
	Level 11	80	10088999	563729	8	1.78969		1.78969			
Average RF						1.85816				1.89636	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Dibenzo (a,h) anthracene	Level 1	0.1		--	8	--					
	Level 2	0.5		--	8	--					
	Level 3	1	117489	534659	8	1.75797	9.44	1.75797	9.444		
	Level 4	2	239987	547736	8	1.75257		1.75257			
	Level 5	5	513004	582229	8	1.40977		1.40977			
	Level 6	10	1204690	669371	8	1.43979		1.43979			
	Level 7	20	2902417	766691	8	1.51426		1.51426			
	Level 8	40	4803582	638369	8	1.50495		1.50495			
	Level 9	50	5642265	616757	8	1.46372		1.46372			
	Level 10	70	5326471	448593	8	1.35700		1.35700			
	Level 11	80	8184236	563729	8	1.45180		1.45180			
Average RF						1.51687				1.5143	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Benzo (g,h,i) perylene	Level 1	0.1		--	8	--					
	Level 2	0.5		--	8	--					
	Level 3	1	129623	534659	8	1.93952	11.15	1.93952	11.146		
	Level 4	2	249430	547736	8	1.82153		1.82153			
	Level 5	5	548653	582229	8	1.50773		1.50773			
	Level 6	10	1246150	669371	8	1.48934		1.48934			
	Level 7	20	2971247	766691	8	1.55017		1.55017			
	Level 8	40	4917574	638369	8	1.54067		1.54067			
	Level 9	50	5848096	616757	8	1.51712		1.41715			
	Level 10	70	5414991	448593	8	1.37955		1.37955			
	Level 11	80	8613697	563729	8	1.52799		1.52799			
Average RF						1.58596				1.58596	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
 Calibration Date: 7/17/2006
 SDG: 247748

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	161425	1069636	8	1.20733		1.20733	
	Level 4	2	229760	807291	8	1.13842		1.13842	
	Level 5	5	371018	642165	8	0.92442		0.92442	
	Level 6	10	1396065	1173330	8	0.95187	10.13	0.95187	10.132
	Level 7	20	2390206	983037	8	0.97258		0.97258	
	Level 8	40	4435583	920606	8	0.96362		0.96362	
	Level 9	50	5437085	929713	8	0.93570		0.9357	
	Level 10	70	6484941	779398	8	0.95091		0.95091	
	Level 11	80	7392779	783268	8	0.94384		0.94384	
Average RF						0.99874		0.99874	
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	169689	598328	8	2.26884		2.26884	
	Level 4	2	247912	454319	8	2.18271		2.18271	
	Level 5	5	392601	368867	8	1.70295		1.70295	
	Level 6	10	1501384	629253	8	1.90878	8.78	1.90878	8.784
	Level 7	20	2624137	534198	8	1.96492		1.96492	
	Level 8	40	4877998	519640	8	1.87745		1.87745	
	Level 9	50	6108895	521889	8	1.87286		1.87286	
	Level 10	70	7245432	436899	8	1.89529		1.89529	
	Level 11	80	8316733	437699	8	1.90010		1.9001	
Average RF						1.95266		1.95266	
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	98987	598328	8	1.32351		1.32351	
	Level 4	2	135816	454319	8	1.19578		1.19578	
	Level 5	5	227271	368867	8	0.98581		0.98581	
	Level 6	10	838250	629253	8	1.06571	10.36	1.06571	10.357
	Level 7	20	1425915	534198	8	1.06771		1.06771	
	Level 8	40	2621278	519640	8	1.00888		1.00888	
	Level 9	50	3284891	521889	8	1.00708		1.00708	
	Level 10	70	3876788	436899	8	1.01411		1.01411	
	Level 11	80	4487906	437699	8	1.02534		1.02534	
Average RF						1.07710		1.0771	
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	111219	598328	8	1.48706		1.48706	
	Level 4	2	157011	454319	8	1.38239		1.38239	
	Level 5	5	255911	368867	8	1.11004		1.11004	
	Level 6	10	971538	629253	8	1.23516	9.13	1.23516	9.128
	Level 7	20	1672489	534198	8	1.25234		1.25234	
	Level 8	40	3118573	519640	8	1.20028		1.20028	
	Level 9	50	3862608	521889	8	1.18419		1.18419	
	Level 10	70	4586450	436899	8	1.19974		1.19974	
	Level 11	80	5300195	437699	8	1.21092		1.21092	
Average RF						1.25135		1.25135	

PAH - polyaromatic hydrocarbons
 PCN - polychlorinated naphthalene
 RF - response factor
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	9.11	--	9.109
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	160638	948941	8	1.35425		1.35425	
	Level 4	2	221074	709168	8	1.24695		1.24695	
	Level 5	5	371624	578256	8	1.02826		1.02826	
	Level 6	10	1444876	1026000	8	1.12661		1.12964	
	Level 7	20	2490709	864285	8	1.15273		1.15273	
	Level 8	40	4187984	784080	8	1.06825		1.06825	
	Level 9	50	5475628	815732	8	1.07401		1.07401	
	Level 10	70	6306533	654616	8	1.10102		1.10102	
	Level 11	80	7075528	660068	8	1.07194		1.07194	
Average RF						1.13600		1.13634	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	8.69	--	8.691
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	142191	948941	8	1.19873		1.19873	
	Level 4	2	187985	709168	8	1.06031		1.06031	
	Level 5	5	390223	578256	8	1.07972		1.07972	
	Level 6	10	1607227	1026000	8	1.25320		1.253	
	Level 7	20	2783079	864285	8	1.28804		1.28804	
	Level 8	40	4062368	784080	8	1.03621		1.03621	
	Level 9	50	5281809	815732	8	1.03599		1.03599	
	Level 10	70	6181901	654616	8	1.07926		1.07926	
	Level 11	80	7034228	660068	8	1.06568		1.06568	
Average RF						1.12191		1.12191	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	10.29	--	10.294
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	181720	948941	8	1.53198		1.53198	
	Level 4	2	265847	709168	8	1.49949		1.49949	
	Level 5	5	421663	578256	8	1.16672		1.16672	
	Level 6	10	1614600	1026000	8	1.25895		1.25895	
	Level 7	20	2720849	864285	8	1.25924		1.25924	
	Level 8	40	4838228	784080	8	1.23412		1.23412	
	Level 9	50	6263103	815732	8	1.22846		1.22846	
	Level 10	70	7057508	654616	8	1.23213		1.23213	
	Level 11	80	7823891	660068	8	1.18532		1.18532	
Average RF						1.28849		1.28849	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	15.73	--	LR - r ² =0.99743
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	199549	837394	8	1.90638		--	
	Level 4	2	253968	568706	8	1.78629		--	
	Level 5	5	418203	522299	8	1.28111		--	
	Level 6	10	1702344	960625	8	1.41770		--	
	Level 7	20	2881687	791859	8	1.45566		--	
	Level 8	40	5045432	732510	8	1.37757		--	
	Level 9	50	6639784	776614	8	1.36795		--	
	Level 10	70	7334072	647883	8	1.29372		--	
	Level 11	80	8087544	641493	8	1.26074		--	
Average RF						1.46079			

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	10.72	--	10.72
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	156137	837394	8	1.49165		1.49165	
	Level 4	2	189291	568706	8	1.33138		1.33138	
	Level 5	5	315395	522299	8	0.96617		0.96617	
	Level 6	10	1535429	960625	8	1.27869		1.27869	
	Level 7	20	2461011	791859	8	1.24316		1.24316	
	Level 8	40	4737740	732510	8	1.29356		1.29356	
	Level 9	50	6068186	776614	8	1.25018		1.25018	
	Level 10	70	7203434	647883	8	1.27068		1.27068	
	Level 11	80	8386810	641493	8	1.30739		1.30739	
Average RF						1.27032		1.27032	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	19.51	--	LR - r ² =0.99824
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	190259	837394	8	1.81763		--	
	Level 4	2	266558	568706	8	1.87484		--	
	Level 5	5	438674	522299	8	1.34382		--	
	Level 6	10	1739923	960625	8	1.44899		--	
	Level 7	20	2348156	791859	8	1.18615		--	
	Level 8	40	4630287	732510	8	1.26422		--	
	Level 9	50	5743445	776614	8	1.18328		--	
	Level 10	70	6686588	647883	8	1.17951		--	
	Level 11	80	7942285	641493	8	1.23809		--	
Average RF						1.39295			
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	5.893	--	5.893
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	138332	616943	8	1.79377		1.79377	
	Level 4	2	172453	408356	8	1.68924		1.68924	
	Level 5	5	299520	309398	8	1.54892		1.54892	
	Level 6	10	1396282	684559	8	1.63174		1.63174	
	Level 7	20	2354722	524120	8	1.79709		1.79709	
	Level 8	40	4373523	482316	8	1.81355		1.81355	
	Level 9	50	6120576	532138	8	1.84030		1.84030	
	Level 10	70	6250626	425648	8	1.67828		1.67828	
	Level 11	80	8110404	443828	8	1.82738		1.82738	
Average RF						1.73559		1.73559	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	8.90	--	8.903
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	150452	616943	8	1.95094		1.95094	
	Level 4	2	244963	408356	8	2.39950		1.23995	
	Level 5	5	343466	309398	8	1.77618		1.77618	
	Level 6	10	1629881	684559	8	1.90474		1.90474	
	Level 7	20	2570394	524120	8	1.96168		1.96168	
	Level 8	40	5020362	482316	8	2.08177		2.08177	
	Level 9	50	6207686	532138	8	1.86649		1.86649	
	Level 10	70	7471782	425648	8	2.00616		2.00616	
	Level 11	80	8573054	443828	8	1.93162		1.93162	
Average RF						1.98656		1.98656	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	8.53	--	8.529
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	152346	616943	8	1.97550		1.9755	
	Level 4	2	196225	408356	8	1.92210		1.9221	
	Level 5	5	321479	309398	8	1.66247		1.66247	
	Level 6	10	1377199	684559	8	1.60944		1.60944	
	Level 7	20	2262203	524120	8	1.72648		1.72648	
	Level 8	40	4195758	482316	8	1.73984		1.73984	
	Level 9	50	5188234	532138	8	1.55997		1.55997	
	Level 10	70	6022869	425648	8	1.61713		1.61713	
	Level 11	80	7129281	443828	8	1.60632		1.60632	
Average RF						1.71325		1.71325	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	4.05	--	4.051
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	165721	616943	8	2.14893		2.14893	
	Level 4	2	210048	408356	8	2.05750		2.0575	
	Level 5	5	375407	309398	8	1.94135		1.94135	
	Level 6	10	1710710	684559	8	1.99920		1.9992	
	Level 7	20	2710057	524120	8	2.06827		2.06827	
	Level 8	40	5170538	482316	8	2.14405		2.14405	
	Level 9	50	6411483	532138	8	1.92777		1.92777	
	Level 10	70	7391563	425648	8	1.98462		1.98462	
	Level 11	80	8753370	443828	8	1.97224		1.97224	
Average RF						2.02710		2.0271	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	5.04	--	5.041
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	132464	616943	8	1.71768		1.71768	
	Level 4	2	163503	408356	8	1.60157		1.60157	
	Level 5	5	287774	309398	8	1.48818		1.48818	
	Level 6	10	1358786	684559	8	1.58793		1.58793	
	Level 7	20	2194190	524120	8	1.67457		1.67457	
	Level 8	40	4178555	482316	8	1.73270		1.7327	
	Level 9	50	5116033	532138	8	1.53826		1.53826	
	Level 10	70	5885626	425648	8	1.58028		1.58028	
	Level 11	80	7037102	443828	8	1.58555		1.58555	
Average RF						1.61186		1.61186	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	5.63	--	5.63
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	145362	616943	8	1.88493		1.88493	
	Level 4	2	189945	408356	8	1.86058		1.86058	
	Level 5	5	316476	309398	8	1.63660		1.6366	
	Level 6	10	1452365	684559	8	1.69729		1.69729	
	Level 7	20	2271155	524120	8	1.73331		1.73331	
	Level 8	40	4278348	482316	8	1.77409		1.77409	
	Level 9	50	5467024	532138	8	1.64379		1.64379	
	Level 10	70	6151374	425648	8	1.65163		1.65163	
	Level 11	80	7249780	443828	8	1.63347		1.63347	
Average RF						1.72397		1.72397	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
 Calibration Date: 7/25/2006
 SDG: 248048

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	107145	727801	8	1.17774		1.17774	
	Level 4	2	269478	997799	8	1.08029		1.08029	
	Level 5	5	348819	592940	8	0.94126		0.94126	
	Level 6	10	1148224	906497	8	1.01333	10.93	1.01333	10.928
	Level 7	20	3433103	1455192	8	0.94368		0.94368	
	Level 8	40	5277153	1125155	8	0.93803		0.93803	
	Level 9	50	6353483	1093564	8	0.92958		0.92958	
	Level 10	70	11272094	1492720	8	0.86301		0.86301	
	Level 11	80	12184002	1451245	8	0.83956		0.83956	
Average RF						0.96961		0.96961	
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	104738	373166	8	2.24539		2.24539	
	Level 4	2	272710	529308	8	2.06088		2.06088	
	Level 5	5	403847	342197	8	1.88826		1.88826	
	Level 6	10	1283778	501823	8	2.04658	8.91	2.04658	8.913
	Level 7	20	3671829	761678	8	1.92828		1.92828	
	Level 8	40	5924316	624666	8	1.89679		1.89679	
	Level 9	50	7690480	647089	8	1.90156		1.90156	
	Level 10	70	12352020	811627	8	1.73930		1.73930	
	Level 11	80	13359202	799211	8	1.67155		1.67155	
Average RF						1.93095		1.93095	
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	64328	373166	8	1.37908		1.37908	
	Level 4	2	157749	529308	8	1.19211		1.19211	
	Level 5	5	231481	342197	8	1.08233		1.08233	
	Level 6	10	719671	501823	8	1.14729	8.70	1.14729	8.696
	Level 7	20	2123425	761678	8	1.11513		1.11513	
	Level 8	40	3474003	624666	8	1.11228		1.11228	
	Level 9	50	4582649	647089	8	1.13311		1.13311	
	Level 10	70	7542867	811627	8	1.06212		1.06212	
	Level 11	80	8391292	799211	8	1.04995		1.04995	
Average RF						1.14149		1.14149	
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	67061	373166	8	1.43767		1.43767	
	Level 4	2	183576	529308	8	1.38729		1.38729	
	Level 5	5	268057	342197	8	1.25335		1.25335	
	Level 6	10	853909	501823	8	1.36129	7.87	1.36129	7.865
	Level 7	20	2408221	761678	8	1.26469		1.26429	
	Level 8	40	3893454	624666	8	1.24657		1.24657	
	Level 9	50	5086803	647089	8	1.25777		1.25777	
	Level 10	70	8237999	811627	8	1.16000		1.16	
	Level 11	80	9072949	799211	8	1.13524		1.13524	
Average RF						1.27821		1.27821	

PAH - polyaromatic hydrocarbons
 PCN - polychlorinated naphthalene
 RF - response factor
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	10.25	--	10.253
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	94890	543785	8	1.39599		1.39599	
	Level 4	2	277760	821887	8	1.35182		1.35182	
	Level 5	5	368186	498803	8	1.18102		1.18102	
	Level 6	10	1211491	779723	8	1.24300		1.243	
	Level 7	20	3318846	1169465	8	1.13517		1.13517	
	Level 8	40	5299889	927088	8	1.14334		1.14334	
	Level 9	50	6736557	919644	8	1.17203		1.17203	
	Level 10	70	11222350	1223050	8	1.04865		1.04865	
	Level 11	80	12185339	1170365	8	1.04116		1.04116	
Average RF						1.19024		1.06244	
Anthracene	Level 1	0.1	--	--	8	--	12.77	--	12.773
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	96080	543785	8	1.41350		1.4135	
	Level 4	2	269247	821887	8	1.31038		1.31038	
	Level 5	5	359722	498803	8	1.15387		1.15387	
	Level 6	10	1182432	779723	8	1.21318		1.21318	
	Level 7	20	3438029	1169465	8	1.17593		1.18593	
	Level 8	40	5360373	927088	8	1.15639		1.15639	
	Level 9	50	6724218	919644	8	1.16988		1.16988	
	Level 10	70	10465526	1223050	8	0.97793		0.97793	
	Level 11	80	10839452	1170365	8	0.92616		0.92616	
Average RF						1.16636		1.16636	
Fluoranthene	Level 1	0.1	--	--	8	--	14.23	--	14.231
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	98934	543785	8	1.45549		1.45549	
	Level 4	2	271656	821887	8	1.32211		1.32211	
	Level 5	5	354688	498803	8	1.13773		1.13773	
	Level 6	10	1207615	779723	8	1.23902		1.23902	
	Level 7	20	3499720	1169465	8	1.19703		1.19703	
	Level 8	40	5343325	927088	8	1.15271		1.15271	
	Level 9	50	6901816	919644	8	1.20078		1.20078	
	Level 10	70	10095163	1223050	8	0.94332		0.94332	
	Level 11	80	10825903	1170365	8	0.92500		0.925	
Average RF						1.17480		1.1748	
Pyrene	Level 1	0.1	--	--	8	--	13.91	--	13.91
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	101933	502393	8	1.62316		1.62316	
	Level 4	2	282610	756603	8	1.49410		1.4941	
	Level 5	5	365897	442870	8	1.32191		1.32191	
	Level 6	10	1252144	691936	8	1.44770		1.4477	
	Level 7	20	3642362	1056740	8	1.37872		1.37872	
	Level 8	40	5582165	844194	8	1.32248		1.32248	
	Level 9	50	7194641	858941	8	1.34019		1.34019	
	Level 10	70	10843760	1134930	8	1.09195		1.09195	
	Level 11	80	11012621	1072833	8	1.02650		1.0265	
Average RF						1.33852		1.33852	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	9.35	--	9.349
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	98733	502393	8	1.57220		1.5722	
	Level 4	2	282157	756603	8	1.49170		1.4917	
	Level 5	5	342511	442870	8	1.23742		1.23742	
	Level 6	10	1194844	691936	8	1.38145		1.38145	
	Level 7	20	3588053	1056740	8	1.35816		1.35816	
	Level 8	40	5551347	844194	8	1.31518		1.31518	
	Level 9	50	7078079	858941	8	1.31848		1.31848	
	Level 10	70	11973762	1134930	8	1.20574		1.20574	
	Level 11	80	12952251	1072833	8	1.20729		1.20729	
Average RF						1.34307		1.34307	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	14.55	--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	101822	502393	8	1.62139		1.62139	
	Level 4	2	251305	756603	8	1.32860		1.3286	
	Level 5	5	319684	442870	8	1.15495		1.15495	
	Level 6	10	1098185	691936	8	1.26970		1.2697	
	Level 7	20	3335509	1056740	8	1.26257		1.26257	
	Level 8	40	5140284	844194	8	1.21780		1.2187	
	Level 9	50	6853013	858941	8	1.27655		1.27655	
	Level 10	70	10296347	1134930	8	1.03683		1.03683	
	Level 11	80	10766876	1072833	8	1.00359		1.00359	
Average RF						1.24133		1.24133	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	4.98	--	4.984
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	85050	490943	8	1.38590		1.3859	
	Level 4	2	258304	722102	8	1.43084		1.43084	
	Level 5	5	334857	414275	8	1.29327		1.29327	
	Level 6	10	1178776	638804	8	1.47623		1.47623	
	Level 7	20	3834656	1035443	8	1.48136		1.48136	
	Level 8	40	5494464	767762	8	1.43129		1.43129	
	Level 9	50	7241836	751713	8	1.54140		1.5414	
	Level 10	70	13656090	1058200	8	1.47486		1.47486	
	Level 11	80	14811781	993455	8	1.49094		1.49094	
Average RF						1.44512		1.44512	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	7.33	--	7.334
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	99005	490943	8	1.61330		1.6133	
	Level 4	2	261446	722102	8	1.44825		1.44825	
	Level 5	5	356960	414275	8	1.37864		1.37864	
	Level 6	10	1140150	638804	8	1.42786		1.42786	
	Level 7	20	3471144	1035443	8	1.34093		1.34093	
	Level 8	40	5442353	767762	8	1.41772		1.41772	
	Level 9	50	6546497	751713	8	1.39340		1.3934	
	Level 10	70	11757700	1058200	8	1.26983		1.26983	
	Level 11	80	12724384	993455	8	1.28082		1.28082	
Average RF						1.39675		1.39675	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
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%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Benzo (a) pyrene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	85584	490943	8	1.39461	5.08	1.39461	5.078		
	Level 4	2	239661	722102	8	1.32757		1.32757			
	Level 5	5	301920	414275	8	1.16607		1.16607			
	Level 6	10	1049611	638804	8	1.31447		1.31447			
	Level 7	20	3265365	1035443	8	1.26144		1.26144			
	Level 8	40	4930471	767762	8	1.28437		1.28437			
	Level 9	50	6082988	751713	8	1.29475		1.29475			
	Level 10	70	11465352	1058200	8	1.23826		1.23826			
	Level 11	80	12283510	993455	8	1.23644		1.23644			
Average RF						1.27978				1.27978	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	105700	490943	8	1.72240	9.04	1.72240	9.037		
	Level 4	2	283982	722102	8	1.57309		1.57309			
	Level 5	5	355753	414275	8	1.37398		1.37398			
	Level 6	10	1217352	638804	8	1.52454		1.52454			
	Level 7	20	3770109	1035443	8	1.45642		1.45642			
	Level 8	40	5740040	767762	8	1.49527		1.49527			
	Level 9	50	6353597	751713	8	1.35235		1.35235			
	Level 10	70	12707744	1058200	8	1.37244		1.37244			
	Level 11	80	12895455	993455	8	1.29804		1.29804			
Average RF						1.46317				1.46317	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	79576	490943	8	1.29670	6.31	1.29670	6.31		
	Level 4	2	229429	722102	8	1.27090		1.27090			
	Level 5	5	289515	414275	8	1.11816		1.11816			
	Level 6	10	1013048	638804	8	1.26868		1.26868			
	Level 7	20	3186922	1035443	8	1.23113		1.23113			
	Level 8	40	4877172	767762	8	1.27049		1.27049			
	Level 9	50	5288159	751713	8	1.12557		1.12557			
	Level 10	70	10867641	1058200	8	1.17371		1.17371			
	Level 11	80	10987165	993455	8	1.10595		1.10595			
Average RF						1.20681				1.20681	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	85591	490943	8	1.39472	9.46	1.39472	9.457		
	Level 4	2	231249	722102	8	1.28098		1.28098			
	Level 5	5	304020	414275	8	1.17418		1.17418			
	Level 6	10	998442	638804	8	1.25039		1.25039			
	Level 7	20	3054659	1035443	8	1.18004		1.18004			
	Level 8	40	4680778	767762	8	1.21933		1.21933			
	Level 9	50	5080669	751713	8	1.08141		1.08141			
	Level 10	70	10177026	1058200	8	1.09912		1.09912			
	Level 11	80	10214509	993455	8	1.02818		1.02818			
Average RF						1.18982				1.18982	

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SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: _____SDG: 247884, 247836, 247811, 247954
248084

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	54097	336370	8	1.28661		1.28661	
	Level 4	2	113335	394501	8	1.14915		1.14915	
	Level 5	5	226531	357936	8	1.01261		1.10261	
	Level 6	10	516120	378623	8	1.09052	11.16	1.09052	11.473
	Level 7	20	1006670	394800	8	1.01993		1.01993	
	Level 8	40	2170174	447864	8	0.96912		0.96912	
	Level 9	50	2718156	441749	8	0.98451		0.98451	
	Level 10	70	2921256	351870	8	0.94881		0.94881	
	Level 11	80	3927500	428773	8	0.91599		0.91599	
Average RF						1.04192		1.039	
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	55338	203029	8	2.18050		2.1805	
	Level 4	2	121766	236492	8	2.05954		2.05954	
	Level 5	5	246061	217227	8	1.81238		1.81238	
	Level 6	10	567225	232603	8	1.95088	10.57	1.95088	10.567
	Level 7	20	1134222	245497	8	1.84804		1.84804	
	Level 8	40	2424580	272810	8	1.77749		1.77749	
	Level 9	50	3011719	268754	8	1.79300		1.793	
	Level 10	70	3245265	234195	8	1.58367		1.58637	
	Level 11	80	4274307	266412	8	1.60440		1.6044	
Average RF						1.84554		1.84554	
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	32342	203029	8	1.27438		1.23438	
	Level 4	2	68305	236492	8	1.15530		1.1553	
	Level 5	5	136775	217227	8	1.00743		1.00743	
	Level 6	10	310495	232603	8	1.06790	12.32	1.0679	13.324
	Level 7	20	623250	245497	8	1.01549		1.01549	
	Level 8	40	1323195	272810	8	0.97005		0.97005	
	Level 9	50	1651638	268754	8	0.98329		0.98329	
	Level 10	70	1793723	234195	8	0.87533		0.87533	
	Level 11	80	2359863	266412	8	0.88579		1.88579	
Average RF						1.02611		1.02611	
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	40220	203029	8	1.58480		1.584	
	Level 4	2	86337	236492	8	1.46029		1.46029	
	Level 5	5	172960	217227	8	1.27395		1.27395	
	Level 6	10	393130	232603	8	1.35211	12.57	1.35211	12.574
	Level 7	20	781569	245497	8	1.27345		1.27345	
	Level 8	40	1660598	272810	8	1.21740		1.2174	
	Level 9	50	2055924	268754	8	1.22397		1.22397	
	Level 10	70	2212497	234195	8	1.07968		1.07968	
	Level 11	80	2938595	266412	8	1.10303		1.10303	
Average RF						1.28541		1.28541	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	10.88	--	10.88
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	62716	355832	8	1.41001		1.41001	
	Level 4	2	135497	419506	8	1.29197		1.29197	
	Level 5	5	263553	375432	8	1.12320		1.1232	
	Level 6	10	621120	411736	8	1.20683		1.20683	
	Level 7	20	1277161	442464	8	1.15459		1.15459	
	Level 8	40	2856441	460364	8	1.24095		1.24095	
	Level 9	50	3680661	424496	8	1.38731		1.38731	
	Level 10	70	3286708	379419	8	0.99000		0.99	
	Level 11	80	4962051	429117	8	1.15634		1.15634	
Average RF						1.21791		1.21791	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	9.97	--	9.971
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	60289	355832	8	1.35545		1.35545	
	Level 4	2	133918	419506	8	1.27691		1.27691	
	Level 5	5	264679	375432	8	1.12800		1.128	
	Level 6	10	618487	411736	8	1.20172		1.20172	
	Level 7	20	1237023	442464	8	1.11830		1.1183	
	Level 8	40	2492484	460364	8	1.08283		1.08283	
	Level 9	50	2959678	424496	8	1.11555		1.11555	
	Level 10	70	3369157	379419	8	1.01483		1.01483	
	Level 11	80	4357571	429117	8	1.01547		1.01547	
Average RF						1.14545		1.14545	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	8.53	--	9.092
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	67595	355832	8	1.51971		1.51971	
	Level 4	2	152143	419506	8	1.45069		1.45069	
	Level 5	5	302355	375432	8	1.28856		1.22526	
	Level 6	10	703425	411736	8	1.36675		1.36675	
	Level 7	20	1398835	442464	8	1.26459		1.26459	
	Level 8	40	2944804	460364	8	1.27934		1.27934	
	Level 9	50	3659533	424496	8	1.37934		1.37934	
	Level 10	70	3814528	379419	8	1.14898		1.14895	
	Level 11	80	5351535	429117	8	1.24710		1.2238	
Average RF						1.32723		1.32723	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	7.30	--	7.3
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	71286	346060	8	1.64795		1.64795	
	Level 4	2	160135	415257	8	1.54251		1.54251	
	Level 5	5	302355	360171	8	1.34316		1.34316	
	Level 6	10	732125	399567	8	1.46584		1.46584	
	Level 7	20	1457689	435984	8	1.33738		1.33738	
	Level 8	40	3068256	444721	8	1.37986		1.37986	
	Level 9	50	3821742	439392	8	1.39165		1.39135	
	Level 10	70	3927924	314839	8	1.42583		1.42583	
	Level 11	80	5468471	404117	8	1.35319		1.35319	
Average RF						1.43193		1.43193	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	7.62	--	7.624
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	68271	346060	8	1.57825		1.57825	
	Level 4	2	143322	415257	8	1.38056		1.38056	
	Level 5	5	288955	360171	8	1.28363		1.28363	
	Level 6	10	688419	399567	8	1.37833		1.37833	
	Level 7	20	1432076	435984	8	1.31388		1.31388	
	Level 8	40	2954833	444721	8	1.32885		1.32885	
	Level 9	50	3909997	439392	8	1.42378		1.42378	
	Level 10	70	3390386	314839	8	1.23070		1.23070	
	Level 11	80	5146328	404117	8	1.27347		1.27347	
Average RF						1.35461		1.35461	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	8.66	--	8.661
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	65456	346060	8	1.51317		1.51317	
	Level 4	2	142386	415257	8	1.37155		1.37155	
	Level 5	5	272253	360171	8	1.20944		1.20944	
	Level 6	10	655684	399567	8	1.31279		1.31279	
	Level 7	20	1339171	435984	8	1.22864		1.22864	
	Level 8	40	2714125	444721	8	1.22060		1.22060	
	Level 9	50	3615658	439392	8	1.31660		1.31660	
	Level 10	70	3193382	314839	8	1.15919		1.15919	
	Level 11	80	4822404	404117	8	1.19332		1.19332	
Average RF						1.28059		1.28059	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	4.75	--	4.75
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	62559	313397	8	1.59693		1.59693	
	Level 4	2	162044	367403	8	1.76421		1.76421	
	Level 5	5	316749	327289	8	1.54847		1.54847	
	Level 6	10	698890	345315	8	1.61914		1.61914	
	Level 7	20	1551062	402458	8	1.54159		1.54159	
	Level 8	40	3206132	399031	8	1.60696		1.60696	
	Level 9	50	4588957	449494	8	1.63347		1.63347	
	Level 10	70	3271946	247671	8	1.50981		1.50981	
	Level 11	80	5982835	388120	8	1.54149		1.54149	
Average RF						1.59578		1.59578	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	14.17	--	14.168
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	73912	313397	8	1.88673		1.88673	
	Level 4	2	144823	367403	8	1.57672		1.57672	
	Level 5	5	279145	327289	8	1.36464		1.36464	
	Level 6	10	661663	345315	8	1.53289		1.53289	
	Level 7	20	1344380	402458	8	1.33617		1.33617	
	Level 8	40	2595895	399031	8	1.30110		1.30110	
	Level 9	50	3673223	449494	8	1.30751		1.0751	
	Level 10	70	3022486	247671	8	1.39470		1.3974	
	Level 11	80	4731084	388120	8	1.21897		1.21897	
Average RF						1.43549		1.43549	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	8.00	--	7.996
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	57608	313397	8	1.47054		1.47054	
	Level 4	2	123984	367403	8	1.34984		1.34984	
	Level 5	5	246044	327289	8	1.20282		1.20282	
	Level 6	10	562824	345315	8	1.30391		1.30391	
	Level 7	20	1235348	402458	8	1.22780		1.2278	
	Level 8	40	2445674	399031	8	1.22581		1.22581	
	Level 9	50	3485192	449494	8	1.24057		1.24057	
	Level 10	70	2543055	247671	8	1.17347		1.17347	
	Level 11	80	4439001	388120	8	1.14372		1.14372	
Average RF						1.25983		1.25983	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	8.69	--	8.692
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	66030	313397	8	1.68553		1.68553	
	Level 4	2	119598	367403	8	1.30209		1.30209	
	Level 5	5	264721	327289	8	1.29413		1.29413	
	Level 6	10	607888	345315	8	1.40831		1.40831	
	Level 7	20	1426629	402458	8	1.41792		1.41792	
	Level 8	40	2745941	399031	8	1.37630		1.3763	
	Level 9	50	3971973	449494	8	1.41385		1.41385	
	Level 10	70	2842778	247671	8	1.31178		1.31178	
	Level 11	80	5121886	388120	8	1.31967		1.31967	
Average RF						1.39217		1.39217	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	8.75	--	8.749
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	53661	313397	8	1.36979		1.36979	
	Level 4	2	116676	367403	8	1.27028		1.27028	
	Level 5	5	215583	327289	8	1.05391		1.05391	
	Level 6	10	511183	345315	8	1.18427		1.18427	
	Level 7	20	1188742	402458	8	1.18148		1.18148	
	Level 8	40	2278428	399031	8	1.14198		1.14198	
	Level 9	50	3277203	449494	8	1.16654		1.16654	
	Level 10	70	2342368	247671	8	1.08087		1.08087	
	Level 11	80	4132572	388120	8	1.06477		1.06477	
Average RF						1.16821		1.16821	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	8.19	--	8.186
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	52580	313397	8	1.34220		1.3422	
	Level 4	2	118056	367403	8	1.28530		1.2853	
	Level 5	5	217097	327289	8	1.06131		1.06131	
	Level 6	10	500244	345315	8	1.15893		1.15893	
	Level 7	20	1166690	402458	8	1.15956		1.15956	
	Level 8	40	2239636	399031	8	1.12254		1.12254	
	Level 9	50	3280659	449494	8	1.16777		1.16777	
	Level 10	70	2311640	247671	8	1.06669		1.06669	
	Level 11	80	4265748	388120	8	1.09908		1.09908	
Average RF						1.16260		1.1626	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 7/27/2006

SDG: 248065, 248048

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	107145	727801	8	1.17774		1.17774	
	Level 4	2	269478	997799	8	1.08029		1.08029	
	Level 5	5	348819	592940	8	0.94126		0.94126	
	Level 6	10	1148224	906497	8	1.01333	10.93	1.01333	10.928
	Level 7	20	3433103	1455192	8	0.94368		0.94368	
	Level 8	40	5277153	1125155	8	0.93803		0.93803	
	Level 9	50	6353483	1093564	8	0.92958		0.92958	
	Level 10	70	11272094	1492720	8	0.86301		0.86301	
	Level 11	80	12184002	1451245	8	0.83956		0.83956	
Average RF						0.96961		0.96961	
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	104738	373166	8	2.24539		2.24539	
	Level 4	2	272710	529308	8	2.06088		1.06088	
	Level 5	5	403847	342197	8	1.88826		1.88826	
	Level 6	10	1283778	501823	8	2.04658	8.91	2.04658	8.913
	Level 7	20	3671829	761678	8	1.92828		1.92828	
	Level 8	40	5924315	624666	8	1.89679		1.89679	
	Level 9	50	7690480	647089	8	1.90156		1.090156	
	Level 10	70	12352020	811627	8	1.73930		1.7393	
	Level 11	80	13359202	799211	8	1.67155		1.67155	
Average RF						1.93095		1.93095	
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	64328	373166	8	1.37908		1.37908	
	Level 4	2	157749	529308	8	1.19211		1.19211	
	Level 5	5	231481	342197	8	1.08233		1.08233	
	Level 6	10	719671	501823	8	1.14729	8.70	1.14729	8.696
	Level 7	20	2123425	761678	8	1.11513		1.11513	
	Level 8	40	3474003	624666	8	1.11228		1.11228	
	Level 9	50	4582649	647089	8	1.13311		1.3311	
	Level 10	70	7542867	811627	8	1.06212		1.60212	
	Level 11	80	8391292	799211	8	1.04995		1.04995	
Average RF						1.14149		1.14149	
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	67061	373166	8	1.43767		1.43767	
	Level 4	2	183576	529308	8	1.38729		1.38729	
	Level 5	5	268057	342197	8	1.25335		1.25335	
	Level 6	10	853909	501823	8	1.36129	7.87	1.36129	7.865
	Level 7	20	2408221	761678	8	1.26469		1.26469	
	Level 8	40	3893454	624666	8	1.24657		1.24657	
	Level 9	50	5086803	647089	8	1.25777		1.25777	
	Level 10	70	8237999	811627	8	1.16000		1.16	
	Level 11	80	9072949	799211	8	1.13524		1.13524	
Average RF						1.27821		1.27821	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	10.25	--	10.253
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	94890	543785	8	1.39599		1.39599	
	Level 4	2	277760	821887	8	1.35182		1.35183	
	Level 5	5	368186	498803	8	1.18102		1.18102	
	Level 6	10	1211491	779723	8	1.24300		1.243	
	Level 7	20	3318846	1169465	8	1.13517		1.13517	
	Level 8	40	5299889	927088	8	1.14334		1.14334	
	Level 9	50	6736557	919644	8	1.17203		1.17203	
	Level 10	70	11222350	1223050	8	1.04865		1.04865	
	Level 11	80	12185339	1170365	8	1.04116		1.04116	
Average RF						1.19024		1.19024	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	12.77	--	12.773
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	96080	543785	8	1.41350		1.4135	
	Level 4	2	269247	821887	8	1.31038		1.31038	
	Level 5	5	359722	498803	8	1.15387		1.15387	
	Level 6	10	1182432	779723	8	1.21318		0.21318	
	Level 7	20	3438029	1169465	8	1.17593		1.17593	
	Level 8	40	5360373	927088	8	1.15639		1.15639	
	Level 9	50	6724218	919644	8	1.16988		1.16988	
	Level 10	70	10465526	1223050	8	0.97793		0.97793	
	Level 11	80	10839452	1170365	8	0.92616		0.92616	
Average RF						1.16636		1.16636	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	14.23	--	14.231
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	98934	543785	8	1.45549		1.45549	
	Level 4	2	271656	821887	8	1.32211		1.32211	
	Level 5	5	354688	498803	8	1.13773		1.13773	
	Level 6	10	1207615	779723	8	1.23902		1.23902	
	Level 7	20	3499720	1169465	8	1.19703		1.19703	
	Level 8	40	5343325	927088	8	1.15271		1.15271	
	Level 9	50	6901816	919644	8	1.20078		1.20078	
	Level 10	70	10095163	1223050	8	0.94332		0.94332	
	Level 11	80	10825903	1170365	8	0.92500		0.925	
Average RF						1.17480		1.1748	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	13.91	--	13.913
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	101933	502393	8	1.62316		1.62316	
	Level 4	2	282610	756603	8	1.49410		1.4941	
	Level 5	5	365897	442870	8	1.32191		1.32191	
	Level 6	10	1252144	691936	8	1.44770		1.4477	
	Level 7	20	3642362	1056740	8	1.37872		1.37872	
	Level 8	40	5582135	844194	8	1.32248		1.32248	
	Level 9	50	7194641	858941	8	1.34019		1.34019	
	Level 10	70	10843760	1134930	8	1.09195		1.09195	
	Level 11	80	11012621	1072833	8	1.02650		1.0265	
Average RF						1.33852		1.33852	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	9.35	--	9.345
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	98733	502393	8	1.57220		1.5722	
	Level 4	2	282157	756603	8	1.49170		1.4917	
	Level 5	5	342511	442870	8	1.23742		1.23742	
	Level 6	10	1194844	691936	8	1.38145		1.38145	
	Level 7	20	3588053	1056740	8	1.35816		1.35816	
	Level 8	40	5551347	844194	8	1.31518		1.31518	
	Level 9	50	7078079	858941	8	1.31848		1.31848	
	Level 10	70	11973762	1134930	8	1.20574		1.20574	
	Level 11	80	12952251	1072833	8	1.20729		1.20729	
Average RF						1.34307		1.34307	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	14.55	--	14.552
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	101822	502393	8	1.62139		1.62139	
	Level 4	2	251305	756603	8	1.32860		1.3286	
	Level 5	5	319684	442870	8	1.15495		1.15495	
	Level 6	10	1098185	691936	8	1.26970		1.2697	
	Level 7	20	3335509	1056740	8	1.26257		1.26257	
	Level 8	40	5140284	844194	8	1.21780		1.2178	
	Level 9	50	6853013	858941	8	1.27655		1.27655	
	Level 10	70	10296347	1134930	8	1.03683		1.03683	
	Level 11	80	10766876	1072833	8	1.00359		1.00359	
Average RF						1.24133		1.24133	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	4.98	--	4.985
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	85050	490943	8	1.38590		1.3859	
	Level 4	2	258304	722102	8	1.43084		1.43084	
	Level 5	5	334857	414275	8	1.29327		1.28327	
	Level 6	10	1178776	638804	8	1.47623		1.47623	
	Level 7	20	3834656	1035443	8	1.48136		1.48136	
	Level 8	40	5494464	767762	8	1.43129		1.43129	
	Level 9	50	7241836	751713	8	1.54140		1.5414	
	Level 10	70	13656090	1058200	8	1.47486		1.47486	
	Level 11	80	14813781	993455	8	1.49114		1.49114	
Average RF						1.44515		1.44515	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	7.33	--	7.334
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	99005	490943	8	1.61330		1.1633	
	Level 4	2	261446	722102	8	1.44825		1.44825	
	Level 5	5	356960	414275	8	1.37864		1.37864	
	Level 6	10	1140150	638804	8	1.42786		1.42786	
	Level 7	20	3471144	1035443	8	1.34093		1.34093	
	Level 8	40	5442353	767762	8	1.41772		1.41772	
	Level 9	50	6546497	751713	8	1.39340		1.3934	
	Level 10	70	11757700	1058200	8	1.26983		1.26983	
	Level 11	80	12724384	993455	8	1.28082		1.28082	
Average RF						1.39675		1.39675	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	5.08	--	5.078
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	85584	490943	8	1.39461		1.39461	
	Level 4	2	239661	722102	8	1.32757		1.32757	
	Level 5	5	301920	414275	8	1.16607		1.16607	
	Level 6	10	1049611	638804	8	1.31447		1.31447	
	Level 7	20	3265365	1035443	8	1.26144		1.26144	
	Level 8	40	4930471	767762	8	1.28437		1.28437	
	Level 9	50	6082988	751713	8	1.29475		1.29475	
	Level 10	70	11465352	1058200	8	1.23826		1.23826	
	Level 11	80	12283510	993455	8	1.23644		1.23644	
Average RF						1.27978		1.28978	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	9.03	--	9.032
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	105700	490943	8	1.72240		1.7224	
	Level 4	2	283982	722102	8	1.57309		1.57309	
	Level 5	5	355753	414275	8	1.37398		1.37398	
	Level 6	10	1217352	638804	8	1.52454		1.52454	
	Level 7	20	3770109	1035443	8	1.45642		1.45642	
	Level 8	40	5740040	767762	8	1.49527		1.49527	
	Level 9	50	6356597	751713	8	1.35298		1.35244	
	Level 10	70	12707744	1058200	8	1.37244		1.37244	
	Level 11	80	12895455	993455	8	1.29804		1.29804	
Average RF						1.46324		1.46324	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	6.31	--	6.31
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	79576	490943	8	1.29670		1.2967	
	Level 4	2	229429	722102	8	1.27090		1.2709	
	Level 5	5	289515	414275	8	1.11816		1.11816	
	Level 6	10	1013048	638804	8	1.26868		1.26868	
	Level 7	20	3186922	1035443	8	1.23113		1.23113	
	Level 8	40	4877172	767762	8	1.27049		1.27049	
	Level 9	50	5288159	751713	8	1.12557		1.12557	
	Level 10	70	10867641	1058200	8	1.17371		1.17371	
	Level 11	80	10987165	993455	8	1.10595		1.10595	
Average RF						1.20681			
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	9.46	--	9.457
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	85591	490943	8	1.39472		1.39472	
	Level 4	2	231249	722102	8	1.28098		1.28098	
	Level 5	5	304020	414275	8	1.17418		1.17418	
	Level 6	10	998442	638804	8	1.25039		1.25039	
	Level 7	20	3054659	1035443	8	1.18004		1.18004	
	Level 8	40	4680778	767762	8	1.21933		1.21933	
	Level 9	50	5080669	751713	8	1.08141		1.08141	
	Level 10	70	10177026	1058200	8	1.09912		1.09912	
	Level 11	80	10214509	993455	8	1.02818		1.02818	
Average RF						1.18982		1.18982	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 8/3/2006SDG: 248289, 248271, 248233,
248208, 248190, 248182, 248160,
248248RF = $\frac{As * Cis}{Ais * Cs}$ where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	116575	778349	8	1.19818		1.19818	
	Level 4	2	234825	837259	8	1.12188		1.1288	
	Level 5	5	412887	665327	8	0.99292		3.99292	
	Level 6	10	663127	504010	8	1.05256	6.72	1.05256	6.72
	Level 7	20	1834807	724228	8	1.01339		1.01339	
	Level 8	40	3644826	708418	8	1.02900		1.029	
	Level 9	50	5043166	772110	8	1.04507		1.04507	
	Level 10	70	4396000	507287	8	0.99037		0.99037	
	Level 11	80	10037186	1017090	8	0.98685		0.98685	
Average RF						1.04780		1.0478	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	119806	430560	8	2.22605		2.22605	
	Level 4	2	241586	452166	8	2.13714		2.13714	
	Level 5	5	428962	352891	8	1.94490		1.9449	
	Level 6	10	735892	278210	8	2.11608	5.16	2.11608	5.16
	Level 7	20	2027514	407633	8	1.98955		1.98955	
	Level 8	40	4144728	408647	8	2.02851		2.02851	
	Level 9	50	5358584	412563	8	2.07816		2.07816	
	Level 10	70	4545595	272598	8	1.90572		1.90572	
	Level 11	80	10784680	552655	8	1.95143		1.95143	
Average RF						2.04195		2.04195	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	72027	430560	8	1.33829		1.33829	
	Level 4	2	134763	452166	8	1.19216		1.19216	
	Level 5	5	240351	352891	8	1.08975		1.08975	
	Level 6	10	405118	278210	8	1.16493	8.43	1.16493	8.43
	Level 7	20	1096083	407633	8	1.07556		1.07556	
	Level 8	40	2188085	408647	8	1.07089		1.07089	
	Level 9	50	2853497	412563	8	1.10664		1.10664	
	Level 10	70	2450317	272598	8	1.02729		1.02729	
	Level 11	80	5873644	552655	8	1.06280		1.0628	
Average RF						1.12537		1.12537	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	85831	430560	8	1.59478		1.59478	
	Level 4	2	164976	452166	8	1.45943		1.45943	
	Level 5	5	288441	352891	8	1.30779		1.30779	
	Level 6	10	497298	278210	8	1.42999	8.01	1.42999	8.01
	Level 7	20	1357235	407633	8	1.33182		1.33182	
	Level 8	40	2667519	408647	8	1.30554		1.30554	
	Level 9	50	3469458	412563	8	1.34552		1.34552	
	Level 10	70	2955016	272598	8	1.23888		1.23888	
	Level 11	80	7121475	552655	8	1.28859		1.28859	
Average RF						1.36693		1.36693	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	7.93	--	7.93
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	123773	716865	8	1.38127		1.38127	
	Level 4	2	246316	783713	8	1.25717		1.25717	
	Level 5	5	389022	571586	8	1.08896		1.08896	
	Level 6	10	653923	443393	8	1.17985		1.17985	
	Level 7	20	1973379	680674	8	1.15966		1.15966	
	Level 8	40	3460756	621463	8	1.11374		1.11374	
	Level 9	50	4901864	680358	8	1.15277		1.15277	
	Level 10	70	4118814	420887	8	1.11840		1.1184	
	Level 11	80	10568880	956039	8	1.10549		1.10549	
Average RF						1.17304		1.17304	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	7.15	--	7.15
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	119047	716865	8	1.32853		1.32853	
	Level 4	2	235516	783713	8	1.20205		1.20205	
	Level 5	5	396282	571586	8	1.10928		1.10928	
	Level 6	10	650160	443393	8	1.17306		1.17306	
	Level 7	20	1939062	680674	8	1.13950		1.1395	
	Level 8	40	3468598	621463	8	1.11627		1.11627	
	Level 9	50	4969255	680358	8	1.16862		1.16862	
	Level 10	70	4062489	420887	8	1.10311		1.10311	
	Level 11	80	9869919	956039	8	1.03238		1.03238	
Average RF						1.15253		1.15253	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	10.60	--	10.595
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	137057	716865	8	1.52952		1.52952	
	Level 4	2	295659	783713	8	1.50902		1.50902	
	Level 5	5	420227	571586	8	1.17631		1.17631	
	Level 6	10	723228	443393	8	1.30490		1.3049	
	Level 7	20	2328416	680674	8	1.36830		1.3683	
	Level 8	40	4080457	621463	8	1.31318		1.31318	
	Level 9	50	6015903	680358	8	1.41476		1.41476	
	Level 10	70	4784985	420887	8	1.29929		1.29929	
	Level 11	80	10489013	956039	8	1.09713		1.09713	
Average RF						1.33471		1.33471	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	11.04	--	11.04
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	142967	704797	8	1.62279		1.62279	
	Level 4	2	303837	812231	8	1.49631		1.49631	
	Level 5	5	442420	509376	8	1.38968		1.38968	
	Level 6	10	754040	387705	8	1.55590		1.5559	
	Level 7	20	2451759	683379	8	1.43508		1.43508	
	Level 8	40	4170945	593446	8	1.40567		1.40567	
	Level 9	50	6224186	672444	8	1.48097		1.48097	
	Level 10	70	4868969	393698	8	1.41340		1.4134	
	Level 11	80	10284040	969975	8	1.06024		1.06024	
Average RF						1.42889		1.42889	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	7.44	--	7.44
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	139145	704797	8	1.57941		1.5794	
	Level 4	2	285846	812231	8	1.40771		1.40771	
	Level 5	5	400899	509376	8	1.25926		1.25926	
	Level 6	10	674921	387705	8	1.39265		1.39265	
	Level 7	20	2312140	683379	8	1.35336		1.35336	
	Level 8	40	4022021	593446	8	1.35548		1.35548	
	Level 9	50	5908471	672444	8	1.40585		1.40585	
	Level 10	70	4598508	393698	8	1.33489		1.33489	
	Level 11	80	11852322	969975	8	1.22192		1.22197	
Average RF						1.36784		1.36784	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	11.58	--	11.58
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	134469	704797	8	1.52633		1.52633	
	Level 4	2	271404	812231	8	1.33659		1.33659	
	Level 5	5	382225	509376	8	1.20061		1.20061	
	Level 6	10	627178	387705	8	1.29413		1.29413	
	Level 7	20	2153386	683379	8	1.26043		1.26043	
	Level 8	40	3816963	593446	8	1.28637		1.28637	
	Level 9	50	5431065	672444	8	1.29226		1.29226	
	Level 10	70	4289572	393698	8	1.24521		1.24521	
	Level 11	80	9325327	969975	8	0.96140		0.9614	
Average RF						1.26704		1.26704	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	7.93	--	7.93
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	132487	681446	8	1.55536		1.55536	
	Level 4	2	294811	765742	8	1.54000		1.54	
	Level 5	5	378973	473254	8	1.28125		1.28125	
	Level 6	10	615908	355211	8	1.38714		1.38714	
	Level 7	20	2186563	619214	8	1.41248		1.41548	
	Level 8	40	3912250	570945	8	1.37045		1.37045	
	Level 9	50	5745568	651330	8	1.41141		1.41141	
	Level 10	70	4959580	394412	8	1.43710		1.4371	
	Level 11	80	16033934	964908	8	1.66171		1.66171	
Average RF						1.45077		1.45077	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	14.02	--	14.02
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	143689	681446	8	1.68687		1.68687	
	Level 4	2	302065	765742	8	1.57789		1.57789	
	Level 5	5	424086	473254	8	1.43377		1.43377	
	Level 6	10	686600	355211	8	1.54635		1.54635	
	Level 7	20	2169881	619214	8	1.40170		1.4017	
	Level 8	40	4274557	570945	8	1.49736		1.49736	
	Level 9	50	6173350	651330	8	1.51649		1.51649	
	Level 10	70	4377419	394412	8	1.26841		1.26841	
	Level 11	80	9650811	964908	8	1.00018		1.00018	
Average RF						1.43656		1.43656	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	6.48	--	6.478
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	122956	681446	8	1.44347		1.4437	
	Level 4	2	260691	765742	8	1.36177		1.36177	
	Level 5	5	350529	473254	8	1.18509		1.18509	
	Level 6	10	573394	355211	8	1.29139		1.29139	
	Level 7	20	1895789	619214	8	1.22464		1.22464	
	Level 8	40	3616052	570945	8	1.26669		1.26669	
	Level 9	50	5271844	651330	8	1.29503		1.29503	
	Level 10	70	4135367	394412	8	1.19827		1.19827	
	Level 11	80	11899174	964908	8	1.23319		1.23319	
Average RF						1.27773		1.27773	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	8.39	--	8.39
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	152767	681446	8	1.79345		1.79345	
	Level 4	2	313794	765742	8	1.63916		1.63916	
	Level 5	5	411679	473254	8	1.39182		1.39182	
	Level 6	10	655003	355211	8	1.47519		1.47519	
	Level 7	20	2225032	619214	8	1.43733		1.43733	
	Level 8	40	4222088	570945	8	1.47898		1.47898	
	Level 9	50	6321506	651330	8	1.55289		1.55289	
	Level 10	70	4884247	394412	8	1.41527		1.41527	
	Level 11	80	14243251	964908	8	1.47613		1.47613	
Average RF						1.51780		1.5178	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	7.65	--	7.65
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	121431	681446	8	1.42557		1.42557	
	Level 4	2	252407	765742	8	1.31850		1.3185	
	Level 5	5	338003	473254	8	1.14274		1.14274	
	Level 6	10	528687	355211	8	1.19070		1.1907	
	Level 7	20	1798079	619214	8	1.16152		1.16152	
	Level 8	40	3431591	570945	8	1.20207		1.20207	
	Level 9	50	5122424	651330	8	1.25833		1.25833	
	Level 10	70	3941325	394412	8	1.14205		1.14205	
	Level 11	80	11527423	964908	8	1.19467		1.19467	
Average RF						1.22624		1.22624	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	8.91	--	8.91
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	129116	681446	8	1.51579		1.51579	
	Level 4	2	264525	765742	8	1.38180		1.3818	
	Level 5	5	346897	473254	8	1.17281		1.17281	
	Level 6	10	551312	355211	8	1.24166		1.24166	
	Level 7	20	1860849	619214	8	1.20207		1.20207	
	Level 8	40	3497625	570945	8	1.22521		1.22524	
	Level 9	50	5170111	651330	8	1.27004		1.27004	
	Level 10	70	4040559	394412	8	1.17080		1.1708	
	Level 11	80	11788542	964908	8	1.22173		1.22173	
Average RF						1.26688		1.26688	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 8/10/2006

SDG: 248301

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Naphthalene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	130060	884825	8	1.17592	13.74	1.17592	13.743		
	Level 4	2	108921	402226	8	1.08318		1.08318			
	Level 5	5	302401	518683	8	0.93283		0.93283			
	Level 6	10	706908	574508	8	0.98437		0.98437			
	Level 7	20	2357168	1031021	8	0.91450		0.91450			
	Level 8	40	3824169	887356	8	0.86192		0.86192			
	Level 9	50	3896459	709769	8	0.87836		0.87836			
	Level 10	70	6184021	883162	8	0.80024		0.80024			
	Level 11	80	7624628	971504	8	0.78483		0.78483			
Average RF						0.93513				0.93513	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Acenaphthylene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	132333	469367	8	2.25551	11.08	2.2551	11.085		
	Level 4	2	119362	235901	8	2.02393		2.02393			
	Level 5	5	319474	282631	8	1.80857		1.80857			
	Level 6	10	748281	309517	8	1.93406		1.93406			
	Level 7	20	2478506	542787	8	1.82650		1.8265			
	Level 8	40	4114643	468059	8	1.75817		1.75817			
	Level 9	50	4201500	379030	8	1.77358		1.77358			
	Level 10	70	6707749	469486	8	1.63285		1.63285			
	Level 11	80	8118771	511608	8	1.58691		1.58691			
Average RF						1.84446				1.84446	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Acenaphthene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	79425	469367	8	1.35374	9.72	1.35374	9.719		
	Level 4	2	71229	235901	8	1.20778		1.20778			
	Level 5	5	197322	282631	8	1.11706		1.11706			
	Level 6	10	464202	309517	8	1.19981		1.19981			
	Level 7	20	1486993	542787	8	1.09582		1.09582			
	Level 8	40	2535175	468059	8	1.08327		1.08327			
	Level 9	50	2534624	379030	8	1.06994		1.06994			
	Level 10	70	4199897	469486	8	1.02237		1.02237			
	Level 11	80	5124252	511608	8	1.00160		1.0016			
Average RF						1.12793				1.12793	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Fluorene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	92469	469367	8	1.57606	11.69	1.57606	11.69		
	Level 4	2	83441	235901	8	1.41485		1.41485			
	Level 5	5	230071	282631	8	1.30245		1.30245			
	Level 6	10	524413	309517	8	1.35544		1.35544			
	Level 7	20	1698723	542787	8	1.25185		1.25185			
	Level 8	40	2782117	468059	8	1.18879		1.18879			
	Level 9	50	2864128	379030	8	1.20903		1.20903			
	Level 10	70	4639295	469486	8	1.12933		1.12933			
	Level 11	80	5652711	511608	8	1.10489		1.10489			
Average RF						1.28141				1.28141	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	11.12	--	11.124
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	139205	740211	8	1.50449		1.50449	
	Level 4	2	122847	364849	8	1.34683		1.34683	
	Level 5	5	350203	454550	8	1.23270		1.2327	
	Level 6	10	790661	485714	8	1.30227		1.30227	
	Level 7	20	2611686	862905	8	1.21065		1.21065	
	Level 8	40	4087070	697414	8	1.17206		1.17206	
	Level 9	50	4257867	559791	8	1.21699		1.21699	
	Level 10	70	6934131	716543	8	1.10597		1.10597	
	Level 11	80	8226164	795050	8	1.03467		1.03467	
Average RF						1.23629		1.23629	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	12.53	--	12.526
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	138270	740211	8	1.49438		1.49438	
	Level 4	2	123622	364849	8	1.35532		1.35532	
	Level 5	5	354607	454550	8	1.24820		1.2482	
	Level 6	10	804782	485714	8	1.32552		1.32552	
	Level 7	20	2562360	862905	8	1.18778		1.18778	
	Level 8	40	4128236	697414	8	1.18387		1.18387	
	Level 9	50	4227791	559791	8	1.20839		1.20839	
	Level 10	70	6560066	716543	8	1.04630		1.0463	
	Level 11	80	7899484	795050	8	0.99358		0.99358	
Average RF						1.22704		1.22704	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	13.23	--	13.239
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	147066	740211	8	1.58945		1.58945	
	Level 4	2	128280	364849	8	1.40639		1.40639	
	Level 5	5	367612	454550	8	1.29398		1.29398	
	Level 6	10	862615	485714	8	1.42078		1.42078	
	Level 7	20	2727549	862905	8	1.26436		1.26436	
	Level 8	40	4348162	697414	8	1.24694		1.24694	
	Level 9	50	4401375	559791	8	1.25801		1.25801	
	Level 10	70	6877367	716543	8	1.09691		1.09691	
	Level 11	80	8131473	795050	8	1.02276		1.02276	
Average RF						1.28884		1.28884	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	10.90	--	10.896
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	--	--	8	--		--	
	Level 4	2	--	--	8	--		--	
	Level 5	5	381016	414149	8	1.47200		1.472	
	Level 6	10	880613	470300	8	1.49796		1.49796	
	Level 7	20	2819845	818420	8	1.37819		1.37819	
	Level 8	40	4495200	703884	8	1.27726		1.27726	
	Level 9	50	4530382	543965	8	1.33255		1.33255	
	Level 10	70	7055285	682562	8	1.18131		1.18131	
	Level 11	80	8414908	759458	8	1.10801		1.10801	
Average RF						1.32104		1.32104	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	12.19	--	12.187
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	144699	697539	8	1.65954		1.65954	
	Level 4	2	114169	306429	8	1.49032		1.49032	
	Level 5	5	347233	414149	8	1.34148		1.34148	
	Level 6	10	810620	470300	8	1.37890		1.3789	
	Level 7	20	2690396	818420	8	1.31492		1.31492	
	Level 8	40	4566997	703884	8	1.29766		1.29766	
	Level 9	50	4319153	543965	8	1.27042		1.27042	
	Level 10	70	6987069	682562	8	1.16989		1.16989	
	Level 11	80	8474523	759458	8	1.11586		1.11586	
Average RF						1.33767		1.33767	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	10.36	--	10.361
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	--	--	8	--		--	
	Level 4	2	--	--	8	--		--	
	Level 5	5	328107	414149	8	1.26759		1.26759	
	Level 6	10	784509	470300	8	1.33448		1.33448	
	Level 7	20	2479486	818420	8	1.21184		1.21184	
	Level 8	40	3983405	703884	8	1.13184		1.13184	
	Level 9	50	4145145	543965	8	1.21924		1.21924	
	Level 10	70	6327729	682562	8	1.05949		1.05949	
	Level 11	80	7480541	759458	8	0.98498		0.98498	
Average RF						1.17278		1.17278	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	7.08	--	7.078
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	130951	662222	8	1.58196		1.58196	
	Level 4	2	109075	271500	8	1.60700		1.607	
	Level 5	5	315180	383573	8	1.31471		1.31471	
	Level 6	10	776176	442265	8	1.40400		1.404	
	Level 7	20	2764567	762929	8	1.44945		1.44945	
	Level 8	40	4807072	667828	8	1.43961		1.43961	
	Level 9	50	4572766	525936	8	1.39112		1.39112	
	Level 10	70	7763091	668250	8	1.32766		1.32766	
	Level 11	80	10596210	704345	8	1.50441		1.50441	
Average RF						1.44666		1.44666	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	13.00	--	13.004
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	145450	662222	8	1.75711		1.75711	
	Level 4	2	106417	271500	8	1.56784		1.56784	
	Level 5	5	348073	383573	8	1.45192		1.45192	
	Level 6	10	813607	442265	8	1.47171		1.47171	
	Level 7	20	2521384	762929	8	1.32195		1.32195	
	Level 8	40	4006178	667828	8	1.19976		1.19976	
	Level 9	50	4266207	525936	8	1.29786		1.29786	
	Level 10	70	--	--	8	--		--	
	Level 11	80	--	--	8	--		--	
Average RF						1.43831		1.43831	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	10.81	--	10.811
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	128999	662222	8	1.55838		1.55838	
	Level 4	2	98615	271500	8	1.45289		1.45289	
	Level 5	5	295150	383573	8	1.23116		1.23116	
	Level 6	10	725868	442265	8	1.31300		1.313	
	Level 7	20	2403488	762929	8	1.26014		1.26014	
	Level 8	40	4039542	667828	8	1.20976		1.20976	
	Level 9	50	4068657	525936	8	1.23776		1.23776	
	Level 10	70	6725718	668250	8	1.15025		1.15025	
	Level 11	80	8034049	704345	8	1.14064		1.14064	
Average RF						1.28378		1.28378	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	9.91	--	9.908
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	143539	662222	8	1.73403		1.76403	
	Level 4	2	108733	271500	8	1.60196		1.60196	
	Level 5	5	341555	383573	8	1.42473		1.42473	
	Level 6	10	821690	442265	8	1.48633		1.48633	
	Level 7	20	2721056	762929	8	1.42664		1.42664	
	Level 8	40	4677928	667828	8	1.40094		1.40094	
	Level 9	50	4620523	525936	8	1.40565		1.30697	
	Level 10	70	7642081	668250	8	1.30697		1.30697	
	Level 11	80	8912763	704345	8	1.26540		1.2654	
Average RF						1.45029		1.45029	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	8.88	--	8.879
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	119709	662222	8	1.44615		1.46615	
	Level 4	2	86983	271500	8	1.28152		1.28152	
	Level 5	5	273123	383573	8	1.13928		1.13928	
	Level 6	10	672053	442265	8	1.21566		1.21566	
	Level 7	20	2249435	762929	8	1.17937		1.17937	
	Level 8	40	3930616	667828	8	1.17713		1.17713	
	Level 9	50	3911871	525936	8	1.19007		1.19007	
	Level 10	70	6508256	668250	8	1.11306		1.11306	
	Level 11	80	7688626	704345	8	1.09160		1.0916	
Average RF						1.20376		1.20376	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	10.46	--	10.46
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	124048	662222	8	1.49857		1.49857	
	Level 4	2	92484	271500	8	1.36256		1.36256	
	Level 5	5	283860	383573	8	1.18407		1.18407	
	Level 6	10	695970	442265	8	1.25892		1.25892	
	Level 7	20	2289431	762929	8	1.20034		1.20034	
	Level 8	40	3988981	667828	8	1.19461		1.19461	
	Level 9	50	3976619	525936	8	1.20977		1.20977	
	Level 10	70	6530506	668250	8	1.11686		1.11686	
	Level 11	80	7546066	704345	8	1.07136		1.07136	
Average RF						1.23301		1.23301	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 8/15/2007

SDG: 249379, 248439, 248423

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	69419	429242	8	1.29380		1.2938	
	Level 4	2	132023	439365	8	1.20194		1.20194	
	Level 5	5	317469	492721	8	1.03091		1.03091	
	Level 6	10	312853	228916	8	1.09334	13.58	1.09334	13.576
	Level 7	20	998446	402124	8	0.99317		0.99317	
	Level 8	40	1367130	285825	8	0.95662		0.95662	
	Level 9	50	2148613	357969	8	0.96036		0.96036	
	Level 10	70	2316161	297107	8	0.89094		0.89094	
	Level 11	80	3011940	343413	8	0.87706		0.87706	
Average RF						1.03313		1.03313	
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	70383	248779	8	2.26331		2.26331	
	Level 4	2	135921	257917	8	2.10798		0.210798	
	Level 5	5	339509	290963	8	1.86695		1.86695	
	Level 6	10	410470	168527	8	1.94851	11.72	1.94851	11.724
	Level 7	20	1092091	242780	8	1.79931		1.79932	
	Level 8	40	1600444	183548	8	1.74390		1.7439	
	Level 9	50	2472959	227149	8	1.74191		1.74191	
	Level 10	70	2680736	184133	8	1.66385		1.66385	
	Level 11	80	3470287	219496	8	1.58103		1.58103	
Average RF						1.85742		1.85742	
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	40708	248779	8	1.30905		1.30905	
	Level 4	2	76115	257917	8	1.18046		1.18046	
	Level 5	5	188953	290963	8	1.03905		1.06905	
	Level 6	10	233883	168527	8	1.11025	11.45	1.11025	11.452
	Level 7	20	615469	242780	8	1.01404		1.01404	
	Level 8	40	914169	183548	8	0.99611		0.99611	
	Level 9	50	1438714	227149	8	1.01341		1.01341	
	Level 10	70	1550054	184133	8	0.96207		0.96207	
	Level 11	80	2012640	219496	8	0.91694		0.91694	
Average RF						1.06015		1.06015	
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	51929	248779	8	1.66988		--	
	Level 4	2	97161	257917	8	1.50686		--	
	Level 5	5	232301	290963	8	1.27742		--	
	Level 6	10	292253	168527	8	1.38733	15.54	--	LR
	Level 7	20	737364	242780	8	1.21487		--	r^2=99508
	Level 8	40	1091075	183548	8	1.18887		--	
	Level 9	50	1676002	227149	8	1.18055		--	
	Level 10	70	1789814	184133	8	1.11088		--	
	Level 11	80	2297709	219496	8	1.04681		--	
Average RF						1.28705		--	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	13.06	--	13.062
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	82592	470052	8	1.40567		1.40567	
	Level 4	2	156973	468783	8	1.33941		1.33941	
	Level 5	5	374205	526859	8	1.13641		1.13641	
	Level 6	10	462384	309601	8	1.19479		1.19479	
	Level 7	20	1157076	425202	8	1.08850		1.0885	
	Level 8	40	1712501	323751	8	1.05791		1.05791	
	Level 9	50	2637407	388408	8	1.08645		1.08645	
	Level 10	70	2743958	315668	8	0.99343		0.99343	
	Level 11	80	3489243	361525	8	0.96515		0.96515	
Average RF						1.14086		1.14086	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	13.87	--	13.87
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	84709	470052	8	1.44170		1.4417	
	Level 4	2	155723	468783	8	1.32874		1.32874	
	Level 5	5	377176	526859	8	1.14543		1.14543	
	Level 6	10	465391	309601	8	1.20256		1.20256	
	Level 7	20	1164767	425202	8	1.09573		1.09573	
	Level 8	40	1707220	323751	8	1.05465		1.05465	
	Level 9	50	2559606	388408	8	1.05440		1.0544	
	Level 10	70	2730414	315668	8	0.98853		0.98853	
	Level 11	80	3488752	361525	8	0.96501		0.96501	
Average RF						1.14186		1.14186	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	13.46	--	13.455
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	100311	470052	8	1.70723		1.70723	
	Level 4	2	187527	468783	8	1.60012		1.60012	
	Level 5	5	456343	526859	8	1.38585		1.38585	
	Level 6	10	514949	309601	8	1.33061		1.33061	
	Level 7	20	1391015	425202	8	1.30857		1.30857	
	Level 8	40	2052599	323751	8	1.26801		1.26801	
	Level 9	50	3104689	388408	8	1.27894		1.27894	
	Level 10	70	3252369	315668	8	1.17750		1.1775	
	Level 11	80	4225702	361525	8	1.16885		1.16885	
Average RF						1.35841		1.35841	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	10.74	--	10.742
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	103146	505578	8	1.63213		1.63213	
	Level 4	2	199895	507312	8	1.57611		1.57611	
	Level 5	5	479713	558940	8	1.37321		1.37321	
	Level 6	10	544777	292607	8	1.48944		1.48944	
	Level 7	20	1462080	438072	8	1.33501		1.33501	
	Level 8	40	2137695	318752	8	1.34129		1.34129	
	Level 9	50	3224258	385889	8	1.33686		1.33686	
	Level 10	70	3374526	316178	8	1.21976		1.21976	
	Level 11	80	4365452	364874	8	1.19643		1.19643	
Average RF						1.38892		1.38892	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	9.74	--	9.742
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	103741	505578	8	1.64154		1.64154	
	Level 4	2	195694	507312	8	1.54299		1.54299	
	Level 5	5	460810	558940	8	1.31910		1.3191	
	Level 6	10	502471	292607	8	1.37378		1.37378	
	Level 7	20	1449474	438072	8	1.32350		1.3235	
	Level 8	40	2084775	318752	8	1.30809		1.30809	
	Level 9	50	3213930	385889	8	1.33258		1.33258	
	Level 10	70	3459858	316178	8	1.25060		1.2506	
	Level 11	80	4554203	364874	8	1.24816		1.24816	
Average RF						1.37115		1.37115	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	10.99	--	10.988
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	100357	505578	8	1.58800		1.588	
	Level 4	2	181997	507312	8	1.43499		1.43499	
	Level 5	5	440158	558940	8	1.25998		1.25998	
	Level 6	10	475093	292607	8	1.29892		1.29892	
	Level 7	20	1352929	438072	8	1.23535		1.23535	
	Level 8	40	1930762	318752	8	1.21145		1.21145	
	Level 9	50	2982179	385889	8	1.23649		1.23649	
	Level 10	70	3234680	316178	8	1.16921		1.16921	
	Level 11	80	4159729	364874	8	1.14005		1.14005	
Average RF						1.28605		1.28605	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	7.04	--	7.044
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	102169	506093	8	1.61502		1.61502	
	Level 4	2	190309	526490	8	1.44587		1.44587	
	Level 5	5	480798	588924	8	1.30624		1.30624	
	Level 6	10	496679	267131	8	1.48745		1.48745	
	Level 7	20	1477338	447872	8	1.31943		1.31943	
	Level 8	40	2158448	312739	8	1.38035		1.38035	
	Level 9	50	3549288	394347	8	1.44007		1.44007	
	Level 10	70	3739070	325144	8	1.31426		1.31426	
	Level 11	80	4845044	344882	8	1.40484		1.40484	
Average RF						1.41261		1.41261	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	12.07	--	12.074
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	108807	506093	8	1.71995		1.71995	
	Level 4	2	209552	526490	8	1.59207		1.59207	
	Level 5	5	496034	588924	8	1.34763		1.34763	
	Level 6	10	482185	267131	8	1.44404		1.44404	
	Level 7	20	1508443	447872	8	1.34721		1.34721	
	Level 8	40	1984751	312739	8	1.26927		1.26927	
	Level 9	50	3126454	394347	8	1.26851		1.26851	
	Level 10	70	3496117	325144	8	1.22886		1.22886	
	Level 11	80	4397819	344882	8	1.27517		1.27517	
Average RF						1.38808		1.38808	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	9.03	--	9.034
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	95437	506093	8	1.50861		1.50861	
	Level 4	2	178877	526490	8	1.35902		1.35902	
	Level 5	5	447264	588924	8	1.21514		1.21514	
	Level 6	10	429814	267131	8	1.28720		1.2872	
	Level 7	20	1363751	447872	8	1.21798		1.21798	
	Level 8	40	1857173	312739	8	1.18768		1.18768	
	Level 9	50	3029303	394347	8	1.22909		1.22909	
	Level 10	70	3259625	325144	8	1.14573		1.14573	
	Level 11	80	4037601	344882	8	1.17072		1.17072	
Average RF						1.25791		1.25791	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	12.00	--	11.998
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	113991	506093	8	1.80190		1.18019	
	Level 4	2	221059	526490	8	1.67949		1.67949	
	Level 5	5	547098	588924	8	1.48637		1.48637	
	Level 6	10	480941	267131	8	1.44032		1.44032	
	Level 7	20	1661350	447872	8	1.48377		1.48377	
	Level 8	40	2243921	312739	8	1.43501		1.43501	
	Level 9	50	3578641	394347	8	1.45198		1.45198	
	Level 10	70	3992959	325144	8	1.40350		1.4035	
	Level 11	80	4015602	344882	8	1.16434		1.16434	
Average RF						1.48296		1.48296	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	11.23	--	11.23
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	91042	506093	8	1.43913		1.43913	
	Level 4	2	178433	526490	8	1.35564		1.35564	
	Level 5	5	444063	588924	8	1.20644		1.20644	
	Level 6	10	379406	267131	8	1.13624		1.13614	
	Level 7	20	1357690	447872	8	1.21257		1.21257	
	Level 8	40	1827731	312739	8	1.16885		1.16885	
	Level 9	50	2926009	394347	8	1.18718		1.8718	
	Level 10	70	3294390	325144	8	1.15795		1.15795	
	Level 11	80	3312020	344882	8	0.96033		0.96033	
Average RF						1.20271		1.20271	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	12.44	--	12.436
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	92411	506093	8	1.46077		1.46077	
	Level 4	2	179728	526490	8	1.36548		1.36548	
	Level 5	5	452374	588924	8	1.22902		1.22902	
	Level 6	10	403459	267131	8	1.20827		1.20827	
	Level 7	20	1394261	447872	8	1.24523		1.24523	
	Level 8	40	1844373	312739	8	1.17950		1.1895	
	Level 9	50	2937828	394347	8	1.19198		1.19198	
	Level 10	70	3302678	325144	8	1.16087		1.16087	
	Level 11	80	3131775	344882	8	0.90807		0.90807	
Average RF						1.21658		1.21658	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
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%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 8/24/2006

SDG: 248537, 248926

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	166142	1105608	8	1.20218		1.20218	
	Level 4	2	326567	1177401	8	1.10945		1.10945	
	Level 5	5	589270	969960	8	0.97203		0.97203	
	Level 6	10	1211426	941038	8	1.02986	10.21	1.02986	10.205
	Level 7	20	2288232	955954	8	0.95747		0.95747	
	Level 8	40	5197017	1096844	8	0.94763		0.94763	
	Level 9	50	6337581	1069160	8	0.94842		0.94842	
	Level 10	70	9238233	1164849	8	0.90638		0.90638	
	Level 11	80	8841016	994253	8	0.88921		0.88921	
Average RF						0.99585		0.99585	
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	167791	616485	8	2.17739		2.17739	
	Level 4	2	350524	674614	8	2.07837		2.07837	
	Level 5	5	583881	529846	8	1.76317		1.76317	
	Level 6	10	1260460	516628	8	1.95183	9.16	1.95183	9.16
	Level 7	20	2344311	521497	8	1.79814		1.79814	
	Level 8	40	5508001	615603	8	1.78947		1.78947	
	Level 9	50	6761193	595803	8	1.81569		1.81569	
	Level 10	70	9992146	656387	8	1.73977		1.73977	
	Level 11	80	9397971	567576	8	1.65581		1.65581	
Average RF						1.86329		1.86329	
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	99017	616485	8	1.28492		1.28492	
	Level 4	2	204289	674614	8	1.21129		1.21129	
	Level 5	5	339593	529846	8	1.02548		1.02548	
	Level 6	10	723977	516628	8	1.12108	9.69	1.12108	9.692
	Level 7	20	1345100	521497	8	1.03172		1.03172	
	Level 8	40	3181501	615603	8	1.03362		1.03362	
	Level 9	50	3881420	595803	8	1.04234		1.04234	
	Level 10	70	5793449	656387	8	1.00872		1.00872	
	Level 11	80	5485218	567576	8	0.96643		0.96643	
Average RF						1.08062		1.08062	
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	109172	616485	8	1.41670		1.4167	
	Level 4	2	238883	674614	8	1.41641		1.41641	
	Level 5	5	404488	529846	8	1.22145		1.22145	
	Level 6	10	852499	516628	8	1.32010	7.82	1.32010	7.818
	Level 7	20	1606611	521497	8	1.23231		1.23231	
	Level 8	40	3743732	615603	8	1.21628		1.21628	
	Level 9	50	4573701	595803	8	1.22825		1.22825	
	Level 10	70	6884802	656387	8	1.19874		1.19874	
	Level 11	80	6415242	567576	8	1.13029		1.13029	
Average RF						1.26450		1.2645	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	9.04	--	9.036
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	171133	957366	8	1.43003		1.43003	
	Level 4	2	348865	1079955	8	1.29215		1.29215	
	Level 5	5	574569	773769	8	1.18809		1.18809	
	Level 6	10	1236948	786650	8	1.25794		1.25794	
	Level 7	20	2306960	783570	8	1.17767		1.17767	
	Level 8	40	5583869	970836	8	1.15032		1.15032	
	Level 9	50	6874324	943970	8	1.16518		1.16518	
	Level 10	70	11307347	1090633	8	1.18488		1.18488	
	Level 11	80	8898093	859024	8	1.03584		1.03584	
Average RF						1.20912		1.22297	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	14.55	--	14.547
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	173293	957366	8	1.44808		1.44808	
	Level 4	2	388122	1079955	8	1.43755		1.43755	
	Level 5	5	600610	773769	8	1.24194		1.24194	
	Level 6	10	1335037	786650	8	1.35769		1.35769	
	Level 7	20	2187156	783570	8	1.11651		1.11651	
	Level 8	40	5251828	970836	8	1.08192		1.08192	
	Level 9	50	6701099	943970	8	1.13582		1.13582	
	Level 10	70	9348895	1090633	8	0.97966		0.97966	
	Level 11	80	8889272	859024	8	1.03481		1.03481	
Average RF						1.20377		1.20377	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	10.53	--	10.527
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	184158	957366	8	1.53887		1.53887	
	Level 4	2	384888	1079955	8	1.42557		1.42557	
	Level 5	5	625374	773769	8	1.29315		1.29315	
	Level 6	10	1281089	786650	8	1.30283		1.30286	
	Level 7	20	2415478	783570	8	1.23306		1.23306	
	Level 8	40	5878250	970836	8	1.21097		1.21097	
	Level 9	50	7362786	943970	8	1.24797		1.24797	
	Level 10	70	10969159	1090633	8	1.14944		1.14944	
	Level 11	80	9483062	859024	8	1.10393		1.10393	
Average RF						1.27842		1.27842	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	7.74	--	7.74
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	188641	904885	8	1.66776		1.66776	
	Level 4	2	396736	1030186	8	1.54044		1.54044	
	Level 5	5	615464	686064	8	1.43535		1.43535	
	Level 6	10	1368010	691120	8	1.58353		1.58353	
	Level 7	20	2514571	624289	8	1.61116		1.61116	
	Level 8	40	6058071	838798	8	1.44446		1.44446	
	Level 9	50	7417609	801859	8	1.48008		1.48008	
	Level 10	70	10783127	947306	8	1.30091		1.30091	
	Level 11	80	9681276	693844	8	1.39531		1.39531	
Average RF						1.49544		1.49544	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
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Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	6.89	--	6.888
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	167123	904885	8	1.47752		1.47752	
	Level 4	2	349009	1030186	8	1.35513		1.35513	
	Level 5	5	529342	686064	8	1.23450		1.2345	
	Level 6	10	1157422	691120	8	1.33976		1.33976	
	Level 7	20	1961199	624289	8	1.25660		1.2566	
	Level 8	40	5246539	838798	8	1.25097		1.25097	
	Level 9	50	6696033	801859	8	1.33610		1.3361	
	Level 10	70	10746750	947306	8	1.29652		1.29652	
	Level 11	80	8082084	693844	8	1.16483		1.16483	
Average RF						1.30132		1.30132	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	11.59	--	11.595
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	160744	904885	8	1.42112		1.42112	
	Level 4	2	326336	1030186	8	1.26710		1.2671	
	Level 5	5	576501	686064	8	1.34448		1.34448	
	Level 6	10	1092765	691120	8	1.26492		1.26492	
	Level 7	20	1914165	624289	8	1.22646		1.22646	
	Level 8	40	4643373	838798	8	1.10715		1.10715	
	Level 9	50	5703781	801859	8	1.13811		1.13811	
	Level 10	70	8417230	947306	8	1.01548		1.10548	
	Level 11	80	7132870	693844	8	1.02802		1.02802	
Average RF						1.20143		1.20143	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	9.00	--	8.996
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	163502	910920	8	1.43593		1.43593	
	Level 4	2	393834	1028560	8	1.53159		1.53159	
	Level 5	5	598412	698707	8	1.37033		1.37033	
	Level 6	10	1138276	676273	8	1.34653		1.34653	
	Level 7	20	2019940	592340	8	1.36404		1.36404	
	Level 8	40	6570271	845281	8	1.55458		1.55458	
	Level 9	50	8486686	766220	8	1.77217		1.77217	
	Level 10	70	13051260	1037316	8	1.43792		1.43792	
	Level 11	80	9762330	642792	8	1.51874		1.51874	
Average RF						1.48131		1.48131	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	20.97	--	20.967
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	205178	910920	8	1.80194		1.80194	
	Level 4	2	389221	1028560	8	1.51365		1.51365	
	Level 5	5	552933	698707	8	1.26619		1.26619	
	Level 6	10	1346634	676273	8	1.59301		1.59301	
	Level 7	20	2200365	592340	8	1.48588			
	Level 8	40	4622827	845281	8	1.09380			
	Level 9	50	5268089	766220	8	1.10007			
	Level 10	70	9195860	1037316	8	1.01315			
	Level 11	80	7004011	642792	8	1.08962			
Average RF						1.32859			

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	7.28	--	7.28
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	155211	910920	8	1.36311		1.36311	
	Level 4	2	339697	1028560	8	1.32106		1.32106	
	Level 5	5	498192	698707	8	1.14083		1.14083	
	Level 6	10	1058323	676273	8	1.25195		1.25195	
	Level 7	20	1780980	592340	8	1.20267		1.20268	
	Level 8	40	4871143	845281	8	1.15255		1.15255	
	Level 9	50	5931297	766220	8	1.23856		1.23856	
	Level 10	70	10027182	1037316	8	1.10474		1.10474	
	Level 11	80	7329258	642792	8	1.14022		1.14022	
Average RF						1.21286		1.21286	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	7.16	--	7.157
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	186503	910920	8	1.63793		1.63793	
	Level 4	2	407935	1028560	8	1.58643		1.58643	
	Level 5	5	577713	698707	8	1.32293		1.32293	
	Level 6	10	1268698	676273	8	1.50081		1.50081	
	Level 7	20	2169742	592340	8	1.46520		1.46552	
	Level 8	40	6026002	845281	8	1.42580		1.4258	
	Level 9	50	7264904	766220	8	1.51704		1.51704	
	Level 10	70	12506171	1037316	8	1.37786		1.37786	
	Level 11	80	8768118	642792	8	1.36407		1.36407	
Average RF						1.46645		1.46645	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	6.63	--	6.635
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	148440	910920	8	1.30365		1.30365	
	Level 4	2	333095	1028560	8	1.29538		1.29538	
	Level 5	5	465475	698707	8	1.06591		1.06591	
	Level 6	10	1039296	676273	8	1.22944		1.22944	
	Level 7	20	1807312	592340	8	1.22046		1.22046	
	Level 8	40	5026207	845281	8	1.18924		1.1824	
	Level 9	50	5999165	766220	8	1.25273		1.25273	
	Level 10	70	10347947	1037316	8	1.14008		1.14008	
	Level 11	80	7241155	642792	8	1.12652		1.12652	
Average RF						1.20260		1.2026	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,l) perylene	Level 1	0.1	--	--	8	--	7.00	--	7
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	158141	910920	8	1.38885		1.38885	
	Level 4	2	351170	1028560	8	1.36568		1.36568	
	Level 5	5	501687	698707	8	1.14884		1.14884	
	Level 6	10	1049931	676273	8	1.24202		1.24202	
	Level 7	20	1811355	592340	8	1.22319		1.22319	
	Level 8	40	5058202	845281	8	1.19681		1.19681	
	Level 9	50	6191920	766220	8	1.29298		1.29298	
	Level 10	70	10706046	1037316	8	1.17953		1.17953	
	Level 11	80	7472095	642792	8	1.16244		1.16244	
Average RF						1.24448		1.24448	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 8/29/2007

SDG: 248470, 249327

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	169528	1172339	8	1.15685		1.15685	
	Level 4	2	103787	390034	8	1.06439		1.06439	
	Level 5	5	394182	683702	8	0.92247		0.92247	
	Level 6	10	830174	666004	8	0.99720	9.56	0.9972	9.561
	Level 7	20	1123798	474658	8	0.94704		0.94704	
	Level 8	40	3180113	683881	8	0.93002		0.93002	
	Level 9	50	4122544	698578	8	0.94421		0.94421	
	Level 10	70	6174483	804193	8	0.87747		0.87747	
	Level 11	80	7753908	892971	8	0.86833		0.86833	
Average RF						0.96755		0.96755	
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	166272	599325	8	2.21946		2.21946	
	Level 4	2	120744	249078	8	1.93906		1.93906	
	Level 5	5	441030	395400	8	1.78464		1.78464	
	Level 6	10	864269	359297	8	1.92436	7.80	1.92436	7.805
	Level 7	20	1448481	316038	8	1.83330		1.8333	
	Level 8	40	3535904	380729	8	1.85744		1.85744	
	Level 9	50	4828065	414680	8	1.86286		1.86286	
	Level 10	70	7031141	459967	8	1.74699		1.74699	
	Level 11	80	8654409	499239	8	1.73352		1.73352	
Average RF						1.87796		1.87796	
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	102870	599325	8	1.37314		1.37314	
	Level 4	2	78203	249078	8	1.25588		1.25588	
	Level 5	5	276511	395400	8	1.11891		1.11891	
	Level 6	10	533984	359297	8	1.18895	7.53	1.18895	7.532
	Level 7	20	904273	316038	8	1.14451		1.14451	
	Level 8	40	2198659	380729	8	1.15497		1.15497	
	Level 9	50	3015732	414680	8	1.16359		1.6359	
	Level 10	70	4433277	459967	8	1.10151		1.10151	
	Level 11	80	5451028	499239	8	1.09187		1.09187	
Average RF						1.17704		1.17704	
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	117042	599325	8	1.56232		1.56232	
	Level 4	2	90992	249078	8	1.46126		1.46126	
	Level 5	5	318596	395400	8	1.28921		1.28921	
	Level 6	10	598284	359297	8	1.33212	10.10	1.33212	10.095
	Level 7	20	1018249	316038	8	1.28877		1.28877	
	Level 8	40	2418280	380729	8	1.27034		1.27034	
	Level 9	50	3209041	414680	8	1.23818		1.23818	
	Level 10	70	4653468	459967	8	1.15622		1.5622	
	Level 11	80	5815357	499239	8	1.16484		1.16484	
Average RF						1.30703		1.30703	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	9.88	--	9.878
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	181711	979830	8	1.48361		1.48361	
	Level 4	2	137902	402865	8	1.36921		1.36921	
	Level 5	5	481032	646658	8	1.19020		1.1902	
	Level 6	10	917977	562970	8	1.30448		1.30448	
	Level 7	20	1385167	448852	8	1.23441		1.23441	
	Level 8	40	3648526	592975	8	1.23058		1.23058	
	Level 9	50	4562472	602709	8	1.21119		1.21119	
	Level 10	70	6651249	676153	8	1.12422		1.12422	
	Level 11	80	8105036	749215	8	1.08180		1.0818	
Average RF						1.24774		1.24774	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	9.67	--	9.672
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	178401	979830	8	1.45659		1.45659	
	Level 4	2	136799	402865	8	1.35826		1.35826	
	Level 5	5	475528	646658	8	1.17658		1.17658	
	Level 6	10	911134	562970	8	1.29475		1.29475	
	Level 7	20	1363753	448852	8	1.21533		1.21533	
	Level 8	40	3624932	592975	8	1.22263		1.22263	
	Level 9	50	4536298	602709	8	1.20424		1.20424	
	Level 10	70	6703769	676153	8	1.13309		1.13309	
	Level 11	80	7931319	749215	8	1.05862		1.05862	
Average RF						1.23557		1.23557	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	10.55	--	10.55
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	201540	979830	8	1.64551		1.64551	
	Level 4	2	142476	402865	8	1.41463		1.41463	
	Level 5	5	514933	646658	8	1.27408		1.27408	
	Level 6	10	995407	562970	8	1.41451		1.41451	
	Level 7	20	1394869	448852	8	1.24305		1.24305	
	Level 8	40	4037593	592975	8	1.36181		1.36181	
	Level 9	50	5126171	602709	8	1.36083		1.36083	
	Level 10	70	7328675	676153	8	1.23872		1.23872	
	Level 11	80	8693879	749215	8	1.16040		1.1604	
Average RF						1.34595		1.34595	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	8.88	--	8.875
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	208832	1013764	8	1.64797		1.64797	
	Level 4	2	149137	370681	8	1.60933		1.60933	
	Level 5	5	531453	560971	8	1.51581		1.51581	
	Level 6	10	1021889	550985	8	1.48373		1.48373	
	Level 7	20	1439989	356458	8	1.61589		1.61589	
	Level 8	40	4131074	561343	8	1.47185		1.47185	
	Level 9	50	5198296	507715	8	1.63818		1.63818	
	Level 10	70	7366530	603769	8	1.39439		1.39439	
	Level 11	80	8687247	699939	8	1.24114		1.24114	
Average RF						1.51314		1.51314	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	6.93	--	6.927
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	202418	1013764	8	1.59736		1.59736	
	Level 4	2	136995	370681	8	1.47831		1.47831	
	Level 5	5	466556	560971	8	1.33071		1.33071	
	Level 6	10	973434	550985	8	1.41337		1.41337	
	Level 7	20	1211417	356458	8	1.35939		1.35939	
	Level 8	40	3797976	561343	8	1.35317		1.35317	
	Level 9	50	4408565	507715	8	1.38930		1.38930	
	Level 10	70	6884152	603769	8	1.30308		1.30308	
	Level 11	80	9045438	699939	8	1.29232		1.29232	
Average RF						1.39078		1.39078	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	6.50	--	6.499
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	188073	1013764	8	1.48416		1.48416	
	Level 4	2	124610	370681	8	1.34466		1.34466	
	Level 5	5	435582	560971	8	1.24237		1.24237	
	Level 6	10	895641	550985	8	1.30042		1.30042	
	Level 7	20	1144751	356458	8	1.28458		1.28458	
	Level 8	40	3565843	561343	8	1.27047		1.27047	
	Level 9	50	4059437	507715	8	1.27928		1.27928	
	Level 10	70	6495218	603769	8	1.22946		1.22946	
	Level 11	80	8357522	699939	8	1.19404		1.19404	
Average RF						1.29216		1.29216	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	5.82	--	5.824
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	191521	986428	8	1.55325		1.55325	
	Level 4	2	131004	339807	8	1.54210		1.54210	
	Level 5	5	425341	530990	8	1.28165		1.28165	
	Level 6	10	954977	526068	8	1.45225		1.45225	
	Level 7	20	1158249	327772	8	1.41348		1.41348	
	Level 8	40	3642558	523642	8	1.39124		1.39124	
	Level 9	50	4096559	463653	8	1.41366		1.41366	
	Level 10	70	7150611	567128	8	1.44097		1.44097	
	Level 11	80	9259540	673358	8	1.37513		1.37513	
Average RF						1.42930		1.42930	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	7.10	--	7.105
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	202302	986428	8	1.64068		1.64068	
	Level 4	2	128869	339807	8	1.51697		1.51697	
	Level 5	5	471156	530990	8	1.41971		1.41971	
	Level 6	10	975239	526068	8	1.48306		1.48306	
	Level 7	20	1131864	327772	8	1.38128		1.38128	
	Level 8	40	3770304	523642	8	1.44003		1.44003	
	Level 9	50	4197982	463653	8	1.44866		1.44866	
	Level 10	70	6438824	567128	8	1.29753		1.29753	
	Level 11	80	8975363	673358	8	1.33293		1.33293	
Average RF						1.44009		1.44009	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	6.04	--	6.037
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	179344	986428	8	1.45449		1.45449	
	Level 4	2	115325	339807	8	1.35754		1.35754	
	Level 5	5	407886	530990	8	1.22906		1.22906	
	Level 6	10	877469	526068	8	1.33438		1.33438	
	Level 7	20	1037181	327772	8	1.26573		1.26573	
	Level 8	40	3333402	523642	8	1.27316		1.27316	
	Level 9	50	3760252	463653	8	1.29761		1.29761	
	Level 10	70	6096612	567128	8	1.22857		1.22857	
	Level 11	80	8124037	673358	8	1.20650		1.20650	
Average RF						1.29412		1.29412	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	8.59	--	8.586
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	219210	986428	8	1.77781		1.77781	
	Level 4	2	122604	339807	8	1.44322		1.44322	
	Level 5	5	480786	530990	8	1.44872		1.44872	
	Level 6	10	1061117	526068	8	1.61366		1.61366	
	Level 7	20	1227825	327772	8	1.49839		1.49839	
	Level 8	40	3854293	523642	8	1.47211		1.47211	
	Level 9	50	4476123	463653	8	1.54465		1.54465	
	Level 10	70	6746343	567128	8	1.35950		1.35950	
	Level 11	80	9274121	673358	8	1.37729		1.37729	
Average RF						1.50393		1.50393	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	9.30	--	9.305
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	176832	986428	8	1.43412		1.43412	
	Level 4	2	91207	339807	8	1.07363		1.07363	
	Level 5	5	389356	530990	8	1.17322		1.17322	
	Level 6	10	854412	526068	8	1.29932		1.29932	
	Level 7	20	971509	327772	8	1.18559		1.18559	
	Level 8	40	3150842	523642	8	1.20343		1.20343	
	Level 9	50	3632607	463653	8	1.25356		1.25356	
	Level 10	70	5478129	567128	8	1.10393		1.10393	
	Level 11	80	7514672	673358	8	1.11600		1.11600	
Average RF						1.20476		1.20476	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	8.87	--	8.869
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	182046	986428	8	1.47641		1.47641	
	Level 4	2	103222	339807	8	1.21507		1.21507	
	Level 5	5	400983	530990	8	1.20826		1.20826	
	Level 6	10	871152	526068	8	1.32477		1.32477	
	Level 7	20	1027484	327772	8	1.25390		1.25390	
	Level 8	40	3193021	523642	8	1.21954		1.21954	
	Level 9	50	3726519	463653	8	1.28597		1.28597	
	Level 10	70	5475625	567128	8	1.10343		1.10343	
	Level 11	80	7610485	673358	8	1.13023		1.13023	
Average RF						1.24640		1.24640	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 9/8/2006

SDG: 248981, 249025, 249079, 249072

RF = $\frac{As * Cis}{Ais * Cs}$ where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--	8.48	--	8.484
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	109647	720223	8	1.21792		1.12792	
	Level 4	2	228689	794283	8	1.15168		1.15168	
	Level 5	5	544874	878679	8	0.99217		0.99217	
	Level 6	10	1274596	939284	8	1.08559		1.08559	
	Level 7	20	2374787	926448	8	1.02533		1.02533	
	Level 8	40	4370502	841419	8	1.03884		1.03884	
	Level 9	50	4711529	716354	8	1.05234		1.05234	
	Level 10	70	8047174	974197	8	0.94404		0.94404	
	Level 11	80	7837265	818712	8	0.95727		0.95727	
Average RF						1.05169		1.05169	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Acenaphthylene	Level 1	0.1	--	--	8	--	7.28	--	7.278
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	122926	461251	8	2.13205		2.13205	
	Level 4	2	243188	481931	8	2.01845		2.01845	
	Level 5	5	632024	554626	8	1.82328		1.82328	
	Level 6	10	1401954	567996	8	1.97460		1.9746	
	Level 7	20	2802558	601702	8	1.86309		1.86309	
	Level 8	40	4979602	535918	8	1.85834		1.85834	
	Level 9	50	5188480	437619	8	1.89699		1.89699	
	Level 10	70	9074283	612259	8	1.69383		1.69383	
	Level 11	80	8753738	504717	8	1.73439		1.73439	
Average RF						1.88833		1.88833	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Acenaphthene	Level 1	0.1	--	--	8	--	9.36	--	9.356
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	72353	461251	8	1.25490		1.2549	
	Level 4	2	135232	481931	8	1.12242		1.12242	
	Level 5	5	355308	554626	8	1.02500		1.025	
	Level 6	10	783854	567996	8	1.10403		1.10403	
	Level 7	20	1530260	601702	8	1.01729		1.01729	
	Level 8	40	2706518	535918	8	1.01005		1.01005	
	Level 9	50	2782047	437619	8	1.01716		1.01716	
	Level 10	70	5069975	612259	8	0.94637		0.94637	
	Level 11	80	4751852	504717	8	0.94149		0.94149	
Average RF						1.04874		1.04874	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluorene	Level 1	0.1	--	--	8	--	12.24	--	12.244
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	94690	461251	8	1.64232		1.64232	
	Level 4	2	175175	481931	8	1.45394		1.45394	
	Level 5	5	461497	554626	8	1.33134		1.33134	
	Level 6	10	996438	567996	8	1.40344		1.40344	
	Level 7	20	1975435	601702	8	1.31323		1.31323	
	Level 8	40	3344841	535918	8	1.24827		1.24827	
	Level 9	50	3384594	437619	8	1.23746		1.23746	
	Level 10	70	6117915	612259	8	1.14198		1.14198	
	Level 11	80	5690366	504717	8	1.12744		1.12744	
Average RF						1.32216		1.32216	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	9.71	--	9.712
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	140117	765594	8	1.46414		1.46414	
	Level 4	2	247878	753509	8	1.31586		1.25586	
	Level 5	5	691105	934573	8	1.18318		1.18318	
	Level 6	10	1505232	956982	8	1.25832		1.25832	
	Level 7	20	2865689	962302	8	1.19118		1.19118	
	Level 8	40	4813194	806414	8	1.19373		1.19*373	
	Level 9	50	4766669	633891	8	1.20315		1.20315	
	Level 10	70	8956367	960670	8	1.06549		1.06549	
	Level 11	80	8306592	756596	8	1.09789		1.09789	
Average RF						1.21922		1.21922	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	10.03	--	10.025
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	139116	765594	8	1.45368		1.45368	
	Level 4	2	249096	753509	8	1.32233		1.32233	
	Level 5	5	693456	934573	8	1.18720		1.1872	
	Level 6	10	1502016	956982	8	1.25563		1.25563	
	Level 7	20	2883940	962302	8	1.19877		1.19877	
	Level 8	40	4798850	806414	8	1.19017		1.19017	
	Level 9	50	4836058	633891	8	1.22067		1.22067	
	Level 10	70	8729402	960670	8	1.03849		1.03849	
	Level 11	80	8226552	756596	8	1.08731		1.08731	
Average RF						1.21714		1.21714	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	10.62	--	10.616
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	146013	765594	8	1.52575		1.52575	
	Level 4	2	263476	753509	8	1.39866		1.39866	
	Level 5	5	762328	934573	8	1.30511		1.30511	
	Level 6	10	1690785	956982	8	1.41343		1.41343	
	Level 7	20	2940249	962302	8	1.22217		1.22217	
	Level 8	40	4841052	806414	8	1.20064		1.20064	
	Level 9	50	5146252	633891	8	1.29896		1.29896	
	Level 10	70	9291677	960670	8	1.10538		1.10538	
	Level 11	80	8673788	756596	8	1.14642		1.14642	
Average RF						1.29073		1.29073	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	10.95	--	10.952
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	154414	738724	8	1.67222		1.67222	
	Level 4	2	276788	730676	8	1.51524		1.51524	
	Level 5	5	789291	941347	8	1.34155		1.34155	
	Level 6	10	1750659	983010	8	1.42473		1.42473	
	Level 7	20	3008125	828987	8	1.45147		1.45147	
	Level 8	40	4951990	694068	8	1.42695		1.42695	
	Level 9	50	5306814	584509	8	1.45266		1.45266	
	Level 10	70	9394494	926665	8	1.15862		1.15862	
	Level 11	80	8498795	699700	8	1.21463		1.21463	
Average RF						1.40645			

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	9.50	--	9.499
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	150039	738724	8	1.62485		1.62485	
	Level 4	2	270122	730676	8	1.47875		1.47875	
	Level 5	5	757181	941347	8	1.28697		1.28697	
	Level 6	10	1768696	983010	8	1.43941		1.43941	
	Level 7	20	2778839	828987	8	1.34084		1.34084	
	Level 8	40	4655486	694068	8	1.34151		1.34151	
	Level 9	50	5013520	584509	8	1.37237		1.37237	
	Level 10	70	9671353	926665	8	1.19277		1.19277	
	Level 11	80	8756518	699700	8	1.25147		1.25147	
Average RF						1.36988		1.36988	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	10.59	--	10.591
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	136570	738724	8	1.47898		1.47898	
	Level 4	2	255311	730676	8	1.39767		1.39767	
	Level 5	5	716441	941347	8	1.21773		1.21773	
	Level 6	10	1603021	983010	8	1.30458		1.30458	
	Level 7	20	2603027	828987	8	1.25600		1.256	
	Level 8	40	4470420	694068	8	1.28818		1.28818	
	Level 9	50	4697428	584509	8	1.28585		1.28585	
	Level 10	70	8227624	926665	8	1.01471		1.01471	
	Level 11	80	8056690	699700	8	1.15145		1.15145	
Average RF						1.26613		1.26613	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	5.43	--	5.428
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	138735	689182	8	1.61043		1.61043	
	Level 4	2	278724	743868	8	1.49878		1.49878	
	Level 5	5	757714	894082	8	1.35596		1.35596	
	Level 6	10	1763558	963194	8	1.46476		1.46476	
	Level 7	20	2672099	757837	8	1.41038		1.41038	
	Level 8	40	4622275	671730	8	1.37623		1.37623	
	Level 9	50	4744953	547343	8	1.38705		1.38705	
	Level 10	70	10363943	819388	8	1.44553		1.44553	
	Level 11	80	9473987	637849	8	1.48530		1.4853	
Average RF						1.44827		1.44827	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	10.29	--	10.291
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	153859	689182	8	1.78599		1.78599	
	Level 4	2	291971	743868	8	1.57002		1.57002	
	Level 5	5	793262	894082	8	1.41958		1.41958	
	Level 6	10	1812072	963194	8	1.50505		1.50505	
	Level 7	20	2672710	757837	8	1.41070		1.4107	
	Level 8	40	4881192	671730	8	1.45332		1.45332	
	Level 9	50	5197934	547343	8	1.51947		1.51947	
	Level 10	70	9517916	819388	8	1.32753		1.32753	
	Level 11	80	8045133	637849	8	1.26129		1.26429	
Average RF						1.47255		1.47255	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	8.18	--	8.183
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	131676	689182	8	1.52849		1.52849	
	Level 4	2	253592	743868	8	1.36364		1.36364	
	Level 5	5	668452	894082	8	1.19622		1.19622	
	Level 6	10	1578062	963194	8	1.31069		1.31069	
	Level 7	20	2375036	757837	8	1.25359		1.25359	
	Level 8	40	4209398	671730	8	1.25330		1.25330	
	Level 9	50	4405538	547343	8	1.28783		1.28783	
	Level 10	70	8660689	819388	8	1.20797		1.20797	
	Level 11	80	7654235	637849	8	1.20001		1.20001	
Average RF						1.28908		1.28908	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	8.00	--	7.999
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	144204	689182	8	1.67391		1.67391	
	Level 4	2	309712	743868	8	1.66541		1.66541	
	Level 5	5	771786	894082	8	1.38115		1.38115	
	Level 6	10	1921141	963194	8	1.59564		1.59564	
	Level 7	20	2825274	757837	8	1.49123		1.49123	
	Level 8	40	4998712	671730	8	1.48831		1.48831	
	Level 9	50	5379733	547343	8	1.57261		1.57261	
	Level 10	70	9596742	819388	8	1.33852		1.33852	
	Level 11	80	9048662	637849	8	1.41862		1.41862	
Average RF						1.51393		1.51393	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	7.91	--	7.907
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	119169	689182	8	1.38331		1.38331	
	Level 4	2	256724	743868	8	1.38048		1.38048	
	Level 5	5	638918	894082	8	1.14337		1.14337	
	Level 6	10	1594913	963194	8	1.32469		1.32469	
	Level 7	20	2343849	757837	8	1.23713		1.23713	
	Level 8	40	4162117	671730	8	1.23922		1.23922	
	Level 9	50	4420288	547343	8	1.29214		1.29214	
	Level 10	70	7954724	819388	8	1.10950		1.10950	
	Level 11	80	7509447	637849	8	1.17731		1.17731	
Average RF						1.25413		1.25413	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	8.62	--	8.621
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	116854	689182	8	1.35644		1.35644	
	Level 4	2	259838	743868	8	1.39723		1.39723	
	Level 5	5	632315	894082	8	1.13156		1.13156	
	Level 6	10	1597370	963194	8	1.32673		1.32673	
	Level 7	20	2313942	757837	8	1.22134		1.22134	
	Level 8	40	4021727	671730	8	1.19742		1.19742	
	Level 9	50	4438036	547343	8	1.29733		1.29733	
	Level 10	70	7788873	819388	8	1.08637		1.08637	
	Level 11	80	7448109	637849	8	1.16769		1.16769	
Average RF						1.24246		1.24246	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 9/8/2006

SDG: 248926

RF = $\frac{As * Cis}{Ais * Cs}$ where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	81360	550264	8	1.18285		1.18285	
	Level 4	2	232577	839617	8	1.10801		1.10801	
	Level 5	5	671431	1114679	8	0.96377		0.96377	
	Level 6	10	1366837	1057270	8	1.03424	11.08	1.03424	11.083
	Level 7	20	1831857	761240	8	0.96256		0.96256	
	Level 8	40	4118217	771812	8	1.06716		1.06716	
	Level 9	50	3356320	567656	8	0.94602		0.94602	
	Level 10	70	5386174	706898	8	0.87079		0.87079	
	Level 11	80	7543450	895194	8	0.84266		0.84266	
Average RF						0.99756		0.99756	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	81882	313979	8	2.08631		2.08631	
	Level 4	2	240068	479373	8	2.00318		2.00318	
	Level 5	5	697426	620519	8	1.79830		1.7983	
	Level 6	10	1383182	568785	8	1.94545	9.43	1.94545	9.429
	Level 7	20	2280902	505870	8	1.80355		1.80355	
	Level 8	40	4304362	430776	8	1.99842		1.99842	
	Level 9	50	3844510	347352	8	1.77089		1.77089	
	Level 10	70	5986144	421618	8	1.62263		1.62263	
	Level 11	80	8058007	507778	8	1.58692		1.58692	
Average RF						1.84618		1.84618	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	48399	313979	8	1.23318		1.23318	
	Level 4	2	136216	479373	8	1.13662		1.13662	
	Level 5	5	397844	620519	8	1.02584		1.02584	
	Level 6	10	783968	568785	8	1.10266	7.65	1.10266	7.645
	Level 7	20	1347801	505870	8	1.06573		1.06573	
	Level 8	40	2556036	430776	8	1.18671		1.18671	
	Level 9	50	2306365	347352	8	1.06238		1.06238	
	Level 10	70	3679487	421618	8	0.99738		0.99738	
	Level 11	80	5046122	507778	8	0.99377		0.99377	
Average RF						1.08936		1.08936	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	60266	313979	8	1.53554		1.53554	
	Level 4	2	177307	479373	8	1.47949		1.47949	
	Level 5	5	493259	620519	8	1.27186		1.27186	
	Level 6	10	949210	568785	8	1.33507	11.06	1.33507	11.056
	Level 7	20	1607593	505870	8	1.27115		1.27115	
	Level 8	40	3008085	430776	8	1.39659		1.39659	
	Level 9	50	2606517	347352	8	1.20063		1.20063	
	Level 10	70	4206363	421618	8	1.14020		1.1402	
	Level 11	80	5695851	507778	8	1.12172		1.12172	
Average RF						1.30581		1.30581	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	10.84	--	10.841
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	87584	473582	8	1.47952		1.47952	
	Level 4	2	248628	749923	8	1.32615		1.32615	
	Level 5	5	718465	966255	8	1.18969		1.18969	
	Level 6	10	1372334	886212	8	1.23883		1.23883	
	Level 7	20	2248270	771249	8	1.16604		1.16604	
	Level 8	40	4366309	651813	8	1.33974		1.33974	
	Level 9	50	3547206	490228	8	1.15773		1.15773	
	Level 10	70	5303187	576686	8	1.05097		1.05097	
	Level 11	80	7882538	712476	8	1.10636		1.10636	
Average RF						1.22834		1.22834	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	10.22	--	10.224
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	82514	473582	8	1.39387		1.39387	
	Level 4	2	257998	749923	8	1.37613		1.37613	
	Level 5	5	728217	966255	8	1.20584		1.20584	
	Level 6	10	1390205	886212	8	1.25496		1.25496	
	Level 7	20	2243493	771249	8	1.16356		1.16356	
	Level 8	40	4251626	651813	8	1.30455		1.30455	
	Level 9	50	3540332	490228	8	1.15549		1.15549	
	Level 10	70	5405146	576686	8	1.07117		1.07117	
	Level 11	80	7427127	712476	8	1.04244		1.04244	
Average RF						1.21867		1.21867	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	12.47	--	12.467
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	97099	473582	8	1.64025		1.64025	
	Level 4	2	275149	749923	8	1.46761		1.46761	
	Level 5	5	789705	966255	8	1.30765		1.30765	
	Level 6	10	1541294	886212	8	1.39135		1.39135	
	Level 7	20	2442962	771249	8	1.26702		1.26702	
	Level 8	40	4609157	651813	8	1.41426		1.41426	
	Level 9	50	3781823	490228	8	1.23421		1.23421	
	Level 10	70	5922300	576686	8	1.17366		1.17366	
	Level 11	80	7781416	712476	8	1.09217		1.09217	
Average RF						1.33203		1.33203	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	11.56	--	11.563
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	101441	459526	8	1.76601		1.76601	
	Level 4	2	286639	720549	8	1.59123		1.59123	
	Level 5	5	811803	899980	8	1.44324		1.44324	
	Level 6	10	1601387	849314	8	1.50841		1.50841	
	Level 7	20	2486155	664660	8	1.49620		1.4962	
	Level 8	40	4795655	622225	8	1.54145		1.54145	
	Level 9	50	3830417	428426	8	1.43051		1.43051	
	Level 10	70	6022921	552667	8	1.24548		1.24548	
	Level 11	80	7926489	656388	8	1.20759		1.20759	
Average RF						1.47001		1.47001	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	10.09	--	10.233
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	92295	459526	8	1.60679		1.60679	
	Level 4	2	267198	720549	8	1.48330		1.48333	
	Level 5	5	747765	899980	8	1.32939		1.32939	
	Level 6	10	1513875	849314	8	1.42597		1.42597	
	Level 7	20	2175556	664660	8	1.30927		1.30927	
	Level 8	40	4723581	622225	8	1.51829		1.51829	
	Level 9	50	3551415	428426	8	1.32631		1.32631	
	Level 10	70	5848876	552667	8	1.20949		1.20949	
	Level 11	80	7882691	656388	8	1.20092		1.20092	
Average RF						1.37886		1.37886	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	11.48	--	11.478
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	89429	459526	8	1.55689		1.55689	
	Level 4	2	256932	720549	8	1.42631		1.42631	
	Level 5	5	710284	899980	8	1.26276		1.26276	
	Level 6	10	1428754	849314	8	1.34580		1.34580	
	Level 7	20	2010735	664660	8	1.21008		1.21008	
	Level 8	40	4312480	622225	8	1.38615		1.38615	
	Level 9	50	3315668	428426	8	1.23827		1.23827	
	Level 10	70	5523478	552667	8	1.14220		1.14220	
	Level 11	80	7106290	656388	8	1.08264		1.08264	
Average RF						1.29457		1.29457	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	5.92	--	5.915
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	80308	442086	8	1.45326		1.45326	
	Level 4	2	257964	670481	8	1.53898		1.53898	
	Level 5	5	756402	883719	8	1.36949		1.36949	
	Level 6	10	1578836	830308	8	1.52121		1.52121	
	Level 7	20	1946871	550079	8	1.41570		1.41570	
	Level 8	40	4943809	606849	8	1.62934		1.62934	
	Level 9	50	3604421	400274	8	1.44078		1.44078	
	Level 10	70	5830240	490003	8	1.35981		1.35981	
	Level 11	80	8460060	589875	8	1.43421		1.43421	
Average RF						1.46253		1.46253	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	8.42	--	8.421
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	91068	442086	8	1.64797		1.64797	
	Level 4	2	247100	670481	8	1.47417		1.47417	
	Level 5	5	735692	883719	8	1.33199		1.33199	
	Level 6	10	1458605	830308	8	1.40536		1.40536	
	Level 7	20	1863993	550079	8	1.35544		1.35544	
	Level 8	40	4690388	606849	8	1.54582		1.54582	
	Level 9	50	3524780	400274	8	1.40895		1.40895	
	Level 10	70	5719357	490003	8	1.33395		1.33395	
	Level 11	80	7465599	589875	8	1.26562		1.26562	
Average RF						1.41881		1.41881	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	7.00	--	7.003
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	78090	442086	8	1.41312		1.41312	
	Level 4	2	223628	670481	8	1.33413		1.33413	
	Level 5	5	685548	883719	8	1.24121		1.24121	
	Level 6	10	1370633	830308	8	1.32060		1.32060	
	Level 7	20	1690776	550079	8	1.22948		1.22948	
	Level 8	40	4377860	606849	8	1.44282		1.44282	
	Level 9	50	3215739	400274	8	1.28542		1.28542	
	Level 10	70	5096383	490003	8	1.18865		1.18865	
	Level 11	80	7072903	589875	8	1.19905		1.19905	
Average RF						1.29494		1.29494	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	8.95	--	8.953
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	84739	442086	8	1.53344		1.53344	
	Level 4	2	259989	670481	8	1.55106		1.55106	
	Level 5	5	812434	883719	8	1.47094		1.47094	
	Level 6	10	1613274	830308	8	1.55439		1.55439	
	Level 7	20	1854544	550079	8	1.34857		1.34857	
	Level 8	40	5016950	606849	8	1.65344		1.65344	
	Level 9	50	3695262	400274	8	1.47709		1.47709	
	Level 10	70	5613547	490003	8	1.30927		1.30927	
	Level 11	80	7411189	589875	8	1.25640		1.25640	
Average RF						1.46162		1.46162	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	8.47	--	8.473
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	69670	442086	8	1.26075		1.26075	
	Level 4	2	202507	670481	8	1.20813		1.20813	
	Level 5	5	664669	883719	8	1.20340		1.0234	
	Level 6	10	1318138	830308	8	1.27002		1.27002	
	Level 7	20	1481539	550079	8	1.07733		1.07733	
	Level 8	40	4172533	606849	8	1.37515		1.37515	
	Level 9	50	3042180	400274	8	1.21604		1.21604	
	Level 10	70	4710183	490003	8	1.09858		1.09858	
	Level 11	80	6298776	589875	8	1.06782		1.06782	
Average RF						1.19747		1.19747	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	10.19	--	10.194
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	75167	442086	8	1.36022		1.36022	
	Level 4	2	222757	670481	8	1.32894		1.32894	
	Level 5	5	690011	883719	8	1.24929		1.24929	
	Level 6	10	1383101	830308	8	1.33261		1.33261	
	Level 7	20	1587743	550079	8	1.15456		1.15456	
	Level 8	40	4241269	606849	8	1.39780		1.39780	
	Level 9	50	3120089	400274	8	1.24718		1.24718	
	Level 10	70	4723403	490003	8	1.10166		1.10166	
	Level 11	80	6043710	589875	8	1.02457		1.02457	
Average RF						1.24409		1.24409	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 10/12/2006

SDG: 249177, 249240

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	121720	853727	8	1.14060		1.1406	
	Level 4	2	311875	1170439	8	1.06584		1.06584	
	Level 5	5	755597	1257937	8	0.96106		0.96106	
	Level 6	10	1194014	934451	8	1.02222	9.01	1.02222	9.007
	Level 7	20	2712260	1141502	8	0.95042		0.95042	
	Level 8	40	5271531	1143541	8	0.92197		0.92197	
	Level 9	50	5649987	958129	8	0.94350		0.9435	
	Level 10	70	6649153	867610	8	0.87586		0.87586	
	Level 11	80	8355239	950400	8	0.87913		0.87913	
Average RF						0.97340		0.9734	
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	122726	404598	8	2.42663		1.42663	
	Level 4	2	342269	609074	8	2.24780		1.2478	
	Level 5	5	782342	631437	8	1.98238		1.98238	
	Level 6	10	1169796	438716	8	2.13313	11.52	2.13313	11.518
	Level 7	20	2783623	565565	8	1.96874		1.96874	
	Level 8	40	5503061	597528	8	1.84194		1.84194	
	Level 9	50	5489392	465125	8	1.88832		1.88832	
	Level 10	70	5936359	387412	8	1.75121		1.75121	
	Level 11	80	8054701	460193	8	1.75029		1.75029	
Average RF						1.99894		1.99894	
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	66435	404598	8	1.31360		1.3136	
	Level 4	2	183126	609074	8	1.20265		1.20265	
	Level 5	5	416616	631437	8	1.05566		1.05566	
	Level 6	10	631232	438716	8	1.15105	11.12	1.15015	11.124
	Level 7	20	1490129	565565	8	1.05390		1.0539	
	Level 8	40	3011639	597528	8	1.00803		1.00803	
	Level 9	50	2981646	465125	8	1.02567		1.02567	
	Level 10	70	3258699	387412	8	0.96131		0.96131	
	Level 11	80	4364166	460193	8	0.94833		0.94833	
Average RF						1.08002		1.08002	
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	74783	404598	8	1.47866		1.47866	
	Level 4	2	222490	609074	8	1.46117		1.46117	
	Level 5	5	491629	631437	8	1.24574		1.25474	
	Level 6	10	713662	438716	8	1.30136	11.44	1.30136	11.444
	Level 7	20	1750086	565565	8	1.23776		1.23776	
	Level 8	40	3522539	597528	8	1.17904		1.17904	
	Level 9	50	3451023	465125	8	1.18713		1.18713	
	Level 10	70	3682249	387412	8	1.08626		1.08626	
	Level 11	80	4975788	460193	8	1.08124		1.08124	
Average RF						1.25093		1.25093	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	93096	531736	8	1.40063		1.40063	
	Level 4	2	309018	972728	8	1.27073		1.27073	
	Level 5	5	658216	940498	8	1.11977		1.11977	
	Level 6	10	910532	594939	8	1.22437	9.05	1.22437	9.048
	Level 7	20	2318893	829019	8	1.11886		1.11886	
	Level 8	40	4636627	836926	8	1.10801		1.10801	
	Level 9	50	4674208	645376	8	1.15882		1.15882	
	Level 10	70	4893250	526720	8	1.06172		1.06172	
	Level 11	80	6708436	603928	8	1.11080		1.11080	
Average RF						1.17486		1.17486	
Anthracene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	89849	531736	8	1.35178		1.35178	
	Level 4	2	314641	972728	8	1.29385		1.29385	
	Level 5	5	672816	940498	8	1.14461		1.14461	
	Level 6	10	918455	594939	8	1.23502	10.10	1.23502	10.097
	Level 7	20	2329930	829019	8	1.12419		1.12419	
	Level 8	40	4490605	836926	8	1.07312		1.07312	
	Level 9	50	4421935	645376	8	1.09628		1.09628	
	Level 10	70	4853102	526720	8	1.05301		1.05301	
	Level 11	80	6070424	603928	8	1.00516		1.00516	
Average RF						1.15300		1.53	
Fluoranthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	86513	531736	8	1.30159		1.30159	
	Level 4	2	344920	972728	8	1.41836		1.41836	
	Level 5	5	715425	940498	8	1.21710		1.21710	
	Level 6	10	967888	594939	8	1.30150	8.65	1.30150	8.653
	Level 7	20	2458409	829019	8	1.18618		1.18618	
	Level 8	40	4519469	836926	8	1.08002		1.08002	
	Level 9	50	4790276	645376	8	1.18759		1.18759	
	Level 10	70	5191853	526720	8	1.12651		1.12651	
	Level 11	80	6910224	603928	8	1.14421		1.14421	
Average RF						1.21812		1.21812	
Pyrene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	91873	416982	8	1.76263		1.76263	
	Level 4	2	368035	924250	8	1.59279		1.59279	
	Level 5	5	746197	818820	8	1.45809		1.45809	
	Level 6	10	986250	518384	8	1.52204	7.55	1.52204	7.554
	Level 7	20	2517309	661974	8	1.52109		1.52109	
	Level 8	40	4540472	610752	8	1.48685		1.48685	
	Level 9	50	4967602	528979	8	1.50255		1.50255	
	Level 10	70	5357726	419316	8	1.46026		1.46026	
	Level 11	80	7193835	536529	8	1.34081		1.34081	
Average RF						1.51635		1.51635	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	6.81	--	6.806
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	78936	416982	8	1.51443		1.51443	
	Level 4	2	334650	924250	8	1.44831		1.44831	
	Level 5	5	657947	818820	8	1.28565		1.28565	
	Level 6	10	916027	518384	8	1.41367		1.41367	
	Level 7	20	2149621	661974	8	1.29892		1.29892	
	Level 8	40	4027495	610752	8	1.31886		1.31886	
	Level 9	50	4400930	528979	8	1.33115		1.33115	
	Level 10	70	4536230	419316	8	1.23636		1.23636	
	Level 11	80	6842240	536529	8	1.27528		1.27528	
Average RF						1.34696		1.34696	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	10.86	--	10.857
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	83617	416982	8	1.60423		1.60423	
	Level 4	2	342382	924250	8	1.48177		1.48177	
	Level 5	5	652516	818820	8	1.27504		1.27504	
	Level 6	10	829288	518384	8	1.27980		1.2798	
	Level 7	20	2038149	661974	8	1.23156		1.23156	
	Level 8	40	3765995	610752	8	1.23323		1.23323	
	Level 9	50	4182049	528979	8	1.26494		1.26494	
	Level 10	70	4343806	419316	8	1.18392		1.18392	
	Level 11	80	6422441	536529	8	1.19704		1.19704	
Average RF						1.30573		1.30573	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	14.16	--	14.155
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	93869	410256	8	1.83045		1.83045	
	Level 4	2	397342	932567	8	1.70429		1.70429	
	Level 5	5	782613	826803	8	1.51449		1.51449	
	Level 6	10	837584	523280	8	1.28051		1.28051	
	Level 7	20	2256656	688503	8	1.31105		1.31105	
	Level 8	40	4207554	660161	8	1.27471		1.27471	
	Level 9	50	5003644	585840	8	1.36656		1.36656	
	Level 10	70	5044117	449915	8	1.28129		1.28129	
	Level 11	80	8743669	634060	8	1.37900		1.379	
Average RF						1.43804		1.43804	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	16.02	--	16.015
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	90755	410256	8	1.76972		1.76792	
	Level 4	2	353081	932567	8	1.51445		1.51445	
	Level 5	5	663323	826803	8	1.28364		1.28364	
	Level 6	10	1045630	523280	8	1.59858		1.29858	
	Level 7	20	2316734	688503	8	1.34595		1.34595	
	Level 8	40	4451397	660161	8	1.34858		1.34858	
	Level 9	50	4699135	585840	8	1.28339		1.28339	
	Level 10	70	4740331	449915	8	1.20412		1.20412	
	Level 11	80	6559870	634060	8	1.03458		1.03458	
Average RF						1.37589		1.37589	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	12.89	--	12.891
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	78882	410256	8	1.53820		1.5832	
	Level 4	2	319562	932567	8	1.37068		1.37068	
	Level 5	5	607418	826803	8	1.17545		1.17545	
	Level 6	10	795564	523280	8	1.21627		1.21627	
	Level 7	20	1994338	688503	8	1.15865		1.24865	
	Level 8	40	3731711	660161	8	1.13055		1.13055	
	Level 9	50	4181091	585840	8	1.14191		1.14191	
	Level 10	70	4241272	449915	8	1.07735		1.07735	
	Level 11	80	6619996	634060	8	1.04406		1.04406	
Average RF						1.20590		1.2059	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	14.28	--	14.279
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	100061	410256	8	1.95119		1.95119	
	Level 4	2	377327	932567	8	1.61844		1.61844	
	Level 5	5	722384	826803	8	1.39793		1.39793	
	Level 6	10	956526	523280	8	1.46235		1.46235	
	Level 7	20	2360038	688503	8	1.37111		1.37111	
	Level 8	40	4462627	660161	8	1.35198		1.35198	
	Level 9	50	5038787	585840	8	1.37615		1.37615	
	Level 10	70	5139034	449915	8	1.30540		1.30540	
	Level 11	80	8224262	634060	8	1.29708		1.39708	
Average RF						1.45907		1.45907	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	14.01	--	14.012
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	79231	410256	8	1.54501		1.54501	
	Level 4	2	303239	932567	8	1.30066		1.30066	
	Level 5	5	580297	826803	8	1.12297		1.12297	
	Level 6	10	774058	523280	8	1.18339		1.18339	
	Level 7	20	1910433	688503	8	1.10991		1.10991	
	Level 8	40	3575638	660161	8	1.08326		1.08326	
	Level 9	50	3998375	585840	8	1.09200		1.092	
	Level 10	70	4131866	449915	8	1.04956		1.04956	
	Level 11	80	6470535	634060	8	1.02049		1.02049	
Average RF						1.16747		1.16747	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	15.15	--	LR - r ² = 0.99944
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	87541	410256	8	1.70705			
	Level 4	2	319220	932567	8	1.36921			
	Level 5	5	610925	826803	8	1.18224			
	Level 6	10	790563	523280	8	1.20863			
	Level 7	20	2015191	688503	8	1.17077			
	Level 8	40	3764316	660161	8	1.14042			
	Level 9	50	4341102	585840	8	1.18561			
	Level 10	70	4427082	449915	8	1.12455			
	Level 11	80	7093000	634060	8	1.11866			
Average RF						1.24524			

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 10/23/2006

SDG: 249398, 249439, 249487, 249563

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	76262	595023	8	1.02533		0.98448	
	Level 4	2	130953	532070	8	0.98448		0.98448	
	Level 5	5	340801	602701	8	0.90473		0.90473	
	Level 6	10	955619	813235	8	0.94007	7.76	0.94007	6.689
	Level 7	20	1551119	672188	8	0.92303		0.92303	
	Level 8	40	2861484	655150	8	0.87354		0.87354	
	Level 9	50	3839229	718429	8	0.85503		0.85503	
	Level 10	70	5928831	822520	8	0.82379		0.82379	
	Level 11	80	6342189	772794	8	0.82068		0.82068	
Average RF						0.90563		0.8991	
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	76730	324141	8	1.89374		1.89374	
	Level 4	2	131608	292361	8	1.80062		1.80062	
	Level 5	5	350903	330377	8	1.69941		1.69941	
	Level 6	10	996837	462649	8	1.72370	5.82	1.7237	5.815
	Level 7	20	1611276	375541	8	1.71622		1.71622	
	Level 8	40	3010121	370177	8	1.62631		1.62631	
	Level 9	50	3871488	383833	8	1.61382		1.61381	
	Level 10	70	6247291	441879	8	1.61577		1.61577	
	Level 11	80	6725646	419909	8	1.60169		1.60169	
Average RF						1.69903		1.69903	
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	46817	324141	8	1.15547		1.15547	
	Level 4	2	80064	292361	8	1.09541		1.09541	
	Level 5	5	205663	330377	8	0.99602		0.99602	
	Level 6	10	588939	462649	8	1.01838	6.52	1.01838	6.523
	Level 7	20	947511	375541	8	1.00922		1.00922	
	Level 8	40	1777069	370177	8	0.96012		0.96012	
	Level 9	50	2334860	383833	8	0.97328		0.97328	
	Level 10	70	3758581	441879	8	0.97210		0.9721	
	Level 11	80	4073275	419909	8	0.97004		0.97004	
Average RF						1.01667		1.01667	
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	55378	324141	8	1.36676		1.36676	
	Level 4	2	96486	292361	8	1.32009		1.32009	
	Level 5	5	242675	330377	8	1.17526		1.17526	
	Level 6	10	695357	462649	8	1.20239	8.57	1.20239	8.569
	Level 7	20	1113693	375541	8	1.18623		1.18623	
	Level 8	40	2009595	370177	8	1.08575		1.08575	
	Level 9	50	2648284	383833	8	1.10393		1.10393	
	Level 10	70	4295631	441879	8	1.11100		1.111	
	Level 11	80	4587102	419909	8	1.09240		1.0924	
Average RF						1.18265		1.18265	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	7.66	--	7.671
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	85038	515255	8	1.32032		1.320362	
	Level 4	2	143464	469658	8	1.22186		1.22186	
	Level 5	5	365310	530198	8	1.10241		1.10241	
	Level 6	10	1036484	744401	8	1.11390		1.1139	
	Level 7	20	1731756	625749	8	1.10700		1.1107	
	Level 8	40	3120210	556831	8	1.12070		1.1207	
	Level 9	50	4127251	626526	8	1.05400		1.054	
	Level 10	70	6802349	726800	8	1.06964		1.06964	
	Level 11	80	7269098	683041	8	1.06423		1.06423	
Average RF						1.13045		1.13045	
Anthracene	Level 1	0.1	--	--	8	--	4.41	--	4.39
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	--	--	8	--		--	
	Level 4	2	--	--	8	--		--	
	Level 5	5	362034	530198	8	1.09252		1.09252	
	Level 6	10	1041167	744401	8	1.11893		1.11893	
	Level 7	20	1702433	625749	8	1.08825		1.08825	
	Level 8	40	3016850	556831	8	1.08358		1.08358	
	Level 9	50	3970851	626526	8	1.01406		1.01406	
	Level 10	70	6334111	726800	8	0.99601		0.995601	
	Level 11	80	7018854	683041	8	1.02759		1.02759	
Average RF						1.06014		1.06014	
Fluoranthene	Level 1	0.1	--	--	8	--	7.40	--	7.398
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	--	--	8	--		--	
	Level 4	2	157176	469658	8	1.33864		1.33864	
	Level 5	5	412221	530198	8	1.24398		1.24398	
	Level 6	10	1215525	744401	8	1.30631		1.30631	
	Level 7	20	1925276	625749	8	1.23070		1.2307	
	Level 8	40	3340083	556831	8	1.19968		1.19968	
	Level 9	50	4396958	626526	8	1.12288		1.12288	
	Level 10	70	7165411	726800	8	1.12673		1.12673	
	Level 11	80	7460246	683041	8	1.09221		1.09221	
Average RF						1.20764		1.20764	
Pyrene	Level 1	0.1	--	--	8	--	11.91	--	11.912
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	95162	501563	8	1.51785		1.51785	
	Level 4	2	167675	463944	8	1.44565		1.44565	
	Level 5	5	426971	526594	8	1.29731		1.29731	
	Level 6	10	1248244	753929	8	1.32452		1.32452	
	Level 7	20	1990762	596086	8	1.33589		1.33589	
	Level 8	40	3390536	559744	8	1.21146		1.21146	
	Level 9	50	4508839	621322	8	1.16110		1.1611	
	Level 10	70	7124517	757577	8	1.07478		1.07478	
	Level 11	80	7761684	708722	8	1.09517		1.09517	
Average RF						1.27375		1.27375	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	8.27	--	8.274
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	91278	501563	8	1.45590		1.4559	
	Level 4	2	148581	463944	8	1.28103		1.28103	
	Level 5	5	398275	526594	8	1.21012		1.12012	
	Level 6	10	1165351	753929	8	1.23656		1.26356	
	Level 7	20	1895352	596086	8	1.27186		1.27186	
	Level 8	40	3295576	559744	8	1.17753		1.17753	
	Level 9	50	4419652	621322	8	1.13813		1.13813	
	Level 10	70	7528797	757577	8	1.13577		1.13577	
	Level 11	80	8135647	708722	8	1.14793		1.14793	
Average RF						1.22831		1.22831	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	13.44	--	13.442
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	89212	501563	8	1.42294		1.42294	
	Level 4	2	147218	463944	8	1.26927		1.26927	
	Level 5	5	375220	526594	8	1.14007		1.14007	
	Level 6	10	1074257	753929	8	1.13990		1.1399	
	Level 7	20	1700339	596086	8	1.14100		1.141	
	Level 8	40	3042842	559744	8	1.08723		1.08723	
	Level 9	50	4037003	621322	8	1.03959		1.03959	
	Level 10	70	6404939	757577	8	0.96623		0.96623	
	Level 11	80	6573382	708722	8	0.92750		0.9275	
Average RF						1.12597		1.12597	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	6.04	--	6.039
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	82362	455656	8	1.44604		1.44604	
	Level 4	2	139723	420174	8	1.33014		1.33014	
	Level 5	5	407131	470233	8	1.38529		1.38529	
	Level 6	10	1101068	688298	8	1.27976		1.27976	
	Level 7	20	1995800	571291	8	1.39740		1.3974	
	Level 8	40	3328767	519695	8	1.28105		1.28105	
	Level 9	50	4876164	588883	8	1.32486		1.32486	
	Level 10	70	9414026	726266	8	1.48140		1.4814	
	Level 11	80	10178618	676708	8	1.50414		1.50414	
Average RF						1.38112		1.38112	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	22.28	--	22.281
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	92793	455656	8	1.62918		1.62918	
	Level 4	2	163506	420174	8	1.55656		1.55656	
	Level 5	5	364060	470233	8	1.23874		1.23874	
	Level 6	10	1220067	688298	8	1.41807		1.41807	
	Level 7	20	1758600	571291	8	1.23132		1.23132	
	Level 8	40	3222229	519695	8	1.24005		1.24005	
	Level 9	50	4011419	588883	8	1.08991		1.08991	
	Level 10	70	5507945	726266	8	0.86673		0.86673	
	Level 11	80	5681023	676708	8	0.83951		0.83951	
Average RF						1.23445		1.23445	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	7.52	--	7.518
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	73237	455656	8	1.28583		1.28583	
	Level 4	2	135329	420174	8	1.28831		1.28831	
	Level 5	5	334688	470233	8	1.13880		1.1388	
	Level 6	10	1016230	688298	8	1.18115		1.18115	
	Level 7	20	1674465	571291	8	1.17241		1.1724	
	Level 8	40	2896440	519695	8	1.11467		1.11467	
	Level 9	50	3944634	588883	8	1.07176		1.07176	
	Level 10	70	6779510	726266	8	1.06683		1.06683	
	Level 11	80	7220972	676708	8	1.06707		1.06707	
Average RF						1.15409		1.15409	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	6.99	--	6.992
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	83873	455656	8	1.47257		1.47257	
	Level 4	2	154958	420174	8	1.47518		1.47518	
	Level 5	5	382268	470233	8	1.30069		1.30069	
	Level 6	10	1126865	688298	8	1.30974		1.30974	
	Level 7	20	1929213	571291	8	1.35077		1.35077	
	Level 8	40	3315128	519695	8	1.27580		1.2758	
	Level 9	50	4518223	588883	8	1.22760		1.2276	
	Level 10	70	7949325	726266	8	1.25091		1.25091	
	Level 11	80	8472871	676708	8	1.25207		1.25207	
Average RF						1.32393		1.32393	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	10.12	--	10.118
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	70965	455656	8	1.24594		1.24594	
	Level 4	2	124839	420174	8	1.18845		1.18845	
	Level 5	5	307189	470233	8	1.04523		1.04523	
	Level 6	10	911262	688298	8	1.05915		1.05915	
	Level 7	20	1954029	571291	8	1.36815		1.36815	
	Level 8	40	2773662	519695	8	1.06742		1.06742	
	Level 9	50	3809510	588883	8	1.03505		1.03505	
	Level 10	70	6869265	726266	8	1.08095		1.08095	
	Level 11	80	7256219	676708	8	1.07228		1.07228	
Average RF						1.12918		1.12918	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	7.08	--	7.082
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	74749	455656	8	1.31238		1.31238	
	Level 4	2	124251	420174	8	1.18285		1.18285	
	Level 5	5	316758	470233	8	1.07779		1.07779	
	Level 6	10	941570	688298	8	1.09437		1.09437	
	Level 7	20	1647884	571291	8	1.15380		1.1538	
	Level 8	40	2824751	519695	8	1.08708		1.08708	
	Level 9	50	3868384	588883	8	1.05104		1.05104	
	Level 10	70	7006850	726266	8	1.10260		1.1026	
	Level 11	80	7372479	676708	8	1.08946		1.08946	
Average RF						1.12793		1.12793	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
 Calibration Date: 12/27/2006
 SDG: 249944

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	172642	1361990	8	1.01406		1.01406	
	Level 4	2	249620	1028334	8	0.97097		0.97097	
	Level 5	5	743689	1389331	8	0.85646		0.85646	
	Level 6	10	1191432	1083055	8	0.88005	13.37	0.88005	13.373
	Level 7	20	2670373	1256778	8	0.84991		0.84991	
	Level 8	40	5073450	1325960	8	0.76525		0.76525	
	Level 9	50	5672299	1193674	8	0.76031		0.76031	
	Level 10	70	8646375	1373729	8	0.71932		0.71932	
	Level 11	80	8065053	1176494	8	0.68552		0.68552	
Average RF						0.83354		0.83354	
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	189608	737917	8	2.05560		1.20556	
	Level 4	2	259138	529554	8	1.95741		1.95741	
	Level 5	5	831871	760864	8	1.74932		1.74932	
	Level 6	10	1290857	575847	8	1.79333	12.50	1.79333	1.2498
	Level 7	20	2959881	675512	8	1.75267		1.75267	
	Level 8	40	5661738	708634	8	1.59793		1.59793	
	Level 9	50	6203687	629739	8	1.57619		1.57619	
	Level 10	70	9525243	739161	8	1.47275		1.47275	
	Level 11	80	8779840	620345	8	1.41532		1.42532	
Average RF						1.70784		1.70784	
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	105406	737917	8	1.14274		1.14274	
	Level 4	2	141810	529554	8	1.07117		1.07117	
	Level 5	5	460524	760864	8	0.96842		0.96842	
	Level 6	10	713479	575847	8	0.99121	10.42	0.99121	10.422
	Level 7	20	1643498	675512	8	0.97319		0.97319	
	Level 8	40	3199996	708634	8	0.90314		0.90314	
	Level 9	50	3538894	629739	8	0.89914		0.89914	
	Level 10	70	5536265	739161	8	0.85599		0.85599	
	Level 11	80	5185745	620345	8	0.83595		0.83595	
Average RF						0.96010		0.96010	
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	127305	737917	8	1.38016			
	Level 4	2	174504	529554	8	1.31812			
	Level 5	5	558213	760864	8	1.17385			
	Level 6	10	821470	575847	8	1.14123	15.36		LR - r^2 = .99347
	Level 7	20	1916781	675512	8	1.13501			
	Level 8	40	3590271	708634	8	1.01329			
	Level 9	50	3912860	629739	8	0.99415			
	Level 10	70	5965526	739161	8	0.92236			
	Level 11	80	5478120	620345	8	0.88308			
Average RF						1.10681			

PAH - polyaromatic hydrocarbons
 PCN - polychlorinated naphthalene
 RF - response factor
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	10.89	--	10.889
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	191694	1222899	8	1.25403		1.25403	
	Level 4	2	259021	856689	8	1.20941		1.20941	
	Level 5	5	841548	1264129	8	1.06514		1.06514	
	Level 6	10	1190446	873577	8	1.09018		1.09018	
	Level 7	20	2943102	1124545	8	1.04686		1.04686	
	Level 8	40	5658115	1159999	8	0.97554		0.97554	
	Level 9	50	6183269	998867	8	0.99045		0.99045	
	Level 10	70	9694471	1175511	8	0.94252		0.95252	
	Level 11	80	8787929	952865	8	0.92226		0.92226	
Average RF						1.05515		1.05515	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	12.39	--	12.392
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	195165	1222899	8	1.27674		1.27674	
	Level 4	2	250496	856689	8	1.16960		1.2696	
	Level 5	5	827082	1264129	8	1.04683		1.04683	
	Level 6	10	1182871	873577	8	1.08324		1.08324	
	Level 7	20	2980955	1124545	8	1.06032		1.06032	
	Level 8	40	5568762	1159999	8	0.96013		0.96013	
	Level 9	50	5942706	998867	8	0.95191		0.95191	
	Level 10	70	9212384	1175511	8	0.89565		0.89565	
	Level 11	80	8493025	952865	8	0.89131		0.89131	
Average RF						1.03730		1.0373	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	14.55	--	14.548
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	208809	1222899	8	1.36599		1.36599	
	Level 4	2	276911	856689	8	1.29294		1.29294	
	Level 5	5	921977	1264129	8	1.16694		1.16694	
	Level 6	10	1232659	873577	8	1.12884		1.12884	
	Level 7	20	3223883	1124545	8	1.14673		1.14673	
	Level 8	40	5876761	1159999	8	1.01324		1.01324	
	Level 9	50	6145354	998867	8	0.98437		0.98437	
	Level 10	70	9358825	1175511	8	0.90989		0.90989	
	Level 11	80	8737348	952865	8	0.91696		0.91696	
Average RF						1.10288		1.10288	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	16.86	--	16.865
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	221780	1191228	8	1.48942		1.48942	
	Level 4	2	288049	806378	8	1.42885		1.42885	
	Level 5	5	957054	1218553	8	1.25664		1.25664	
	Level 6	10	1281447	632633	8	1.62046		1.62046	
	Level 7	20	3333099	1016571	8	1.31151		1.31151	
	Level 8	40	6010896	943215	8	1.27455		1.27455	
	Level 9	50	6288438	901106	8	1.11657		1.11657	
	Level 10	70	9590736	1086764	8	1.00858		1.00858	
	Level 11	80	8792208	892824	8	0.98476		0.98476	
Average RF						1.27682		1.27682	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	14.41	--	LR - r^2= .99323
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	229170	1191228	8	1.53905			
	Level 4	2	276026	806378	8	1.36921			
	Level 5	5	966542	1218553	8	1.26910			
	Level 6	10	1002417	632633	8	1.26761			
	Level 7	20	3024853	1016571	8	1.19022			
	Level 8	40	5231999	943215	8	1.10940			
	Level 9	50	6399036	901106	8	1.13621			
	Level 10	70	9711327	1086764	8	1.02126			
	Level 11	80	8788162	892824	8	0.98431			
Average RF						1.20960			
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	15.67	--	15.666
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	197845	1191228	8	1.32868		1.32868	
	Level 4	2	260479	806378	8	1.29209		1.29209	
	Level 5	5	859392	1218553	8	1.12841		1.12841	
	Level 6	10	927760	632633	8	1.17320		1.1732	
	Level 7	20	2935995	1016571	8	1.15525		1.15525	
	Level 8	40	4872098	943215	8	1.03308		1.03308	
	Level 9	50	5419574	901106	8	0.96230		0.9623	
	Level 10	70	8066466	1086764	8	0.84828		0.84828	
	Level 11	80	7850480	892824	8	0.87929		0.87929	
Average RF						1.08895			
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	16.14	--	16.137
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	262619	1206990	8	1.74065		1.74065	
	Level 4	2	322693	801653	8	1.61014		1.61014	
	Level 5	5	1251390	1251596	8	1.59974		1.59974	
	Level 6	10	1029596	627335	8	1.31298		1.31298	
	Level 7	20	3687665	1033424	8	1.42736		1.42736	
	Level 8	40	5939854	868970	8	1.36710		1.3671	
	Level 9	50	7034093	933999	8	1.20499		1.20499	
	Level 10	70	11797283	1131752	8	1.19130		1.1913	
	Level 11	80	10124558	951293	8	1.06429		1.06429	
Average RF						1.39095			
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	20.88	--	20.875
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	206839	1206990	8	1.37094		1.37094	
	Level 4	2	275074	801653	8	1.37253		1.37253	
	Level 5	5	769847	1251596	8	0.98415		0.98415	
	Level 6	10	1062079	627335	8	1.35440		1.3544	
	Level 7	20	2784673	1033424	8	1.07784		1.07784	
	Level 8	40	4223847	868970	8	0.97215		0.97215	
	Level 9	50	5808140	933999	8	0.99497		0.99497	
	Level 10	70	7589352	1131752	8	0.76638		0.76638	
	Level 11	80	8380885	951293	8	0.88100		0.881	
Average RF						1.08604			

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	12.86	--	12.861
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	201462	1206990	8	1.33530		1.3353	
	Level 4	2	252306	801653	8	1.25893		1.25893	
	Level 5	5	881985	1251596	8	1.12750		1.1275	
	Level 6	10	918923	627335	8	1.17184		1.17184	
	Level 7	20	2856828	1033424	8	1.10577		1.10577	
	Level 8	40	4574921	868970	8	1.05295		1.05295	
	Level 9	50	6000720	933999	8	1.02796		1.02796	
	Level 10	70	9055442	1131752	8	0.91443		0.91443	
	Level 11	80	8756979	951293	8	0.92053		0.92053	
Average RF						1.10169		1.10169	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	13.16	--	13.161
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	244491	1206990	8	1.62050		1.6205	
	Level 4	2	309868	801653	8	1.54615		1.54615	
	Level 5	5	1079044	1251596	8	1.37942		1.37942	
	Level 6	10	1096141	627335	8	1.39784		1.39784	
	Level 7	20	3292696	1033424	8	1.27448		1.27448	
	Level 8	40	5263539	868970	8	1.21144		1.21444	
	Level 9	50	7259367	933999	8	1.24358		1.24358	
	Level 10	70	11018680	1131752	8	1.11268		1.11268	
	Level 11	80	10904919	951293	8	1.14633		1.14633	
Average RF						1.32582		1.32582	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	14.53	--	14.527
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	200622	1206990	8	1.32973		1.32973	
	Level 4	2	249686	801653	8	1.24586		1.24586	
	Level 5	5	672644	1251596	8	0.85989		0.85989	
	Level 6	10	908717	627335	8	1.15883		1.15883	
	Level 7	20	2656761	1033424	8	1.02833		1.02833	
	Level 8	40	4330030	868970	8	0.99659		0.99659	
	Level 9	50	6048120	933999	8	1.03608		1.03608	
	Level 10	70	9192619	1131752	8	0.92828		0.92828	
	Level 11	80	9140727	951293	8	0.96087		0.96087	
Average RF						1.06050		1.0605	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	9.53	--	9.533
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	211114	1206990	8	1.39928		1.39928	
	Level 4	2	262575	801653	8	1.31017		1.31017	
	Level 5	5	932996	1251596	8	1.19271		1.19271	
	Level 6	10	950653	627335	8	1.21231		1.21231	
	Level 7	20	2983837	1033424	8	1.15493		1.15493	
	Level 8	40	4804550	868970	8	1.10580		1.1058	
	Level 9	50	6676006	933999	8	1.14364		1.14364	
	Level 10	70	10372060	1131752	8	1.04738		1.04738	
	Level 11	80	10251604	951293	8	1.07765		1.07765	
Average RF						1.18265		1.18265	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

(Page 65 of 100)

Laboratory: Severn Trent
 Calibration Date: 1/7/2007
 SDG: 250183

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Naphthalene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	153836	1202402	8	1.02352	13.87	1.02352	13.868		
	Level 4	2	281985	1165970	8	0.96738		0.96738			
	Level 5	5	705240	1315062	8	0.85805		0.85805			
	Level 6	10	1388090	1290812	8	0.86029		0.86029			
	Level 7	20	2265530	1070868	8	0.84624		0.84624			
	Level 8	40	4711803	1233063	8	0.76424		0.76424			
	Level 9	50	5800683	1258354	8	0.73756		0.73756			
	Level 10	70	8107408	1323306	8	0.70019		0.70019			
	Level 11	80	8450688	1211881	8	0.69732		0.69732			
Average RF						0.82831				0.82831	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Acenaphthylene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	169942	645197	8	2.10716	26.26		LR - r^2=0.99031		
	Level 4	2	293724	608716	8	1.93012					
	Level 5	5	806479	727635	8	1.77337					
	Level 6	10	674498	674498	8	0.80000					
	Level 7	20	2203071	551321	8	1.59839					
	Level 8	40	5002368	695531	8	1.43843					
	Level 9	50	6173097	714264	8	1.38282					
	Level 10	70	8609136	780901	8	1.25996					
	Level 11	80	8820850	691740	8	1.27517					
Average RF						1.50727					
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Acenaphthene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	88006	645197	8	1.09121	41.58		LR - r^2=0.99407		
	Level 4	2	318306	608716	8	2.09166					
	Level 5	5	426327	727635	8	0.93745					
	Level 6	10	809029	674498	8	0.95956					
	Level 7	20	1268197	551321	8	0.92012					
	Level 8	40	2862384	695531	8	0.82308					
	Level 9	50	3583073	714264	8	0.80263					
	Level 10	70	5067341	780901	8	0.74161					
	Level 11	80	5112251	691740	8	0.73904					
Average RF						1.01182					
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported			
						RF	%RSD	RF	%RSD		
Fluorene	Level 1	0.1	--	--	8	--		--			
	Level 2	0.5	--	--	8	--		--			
	Level 3	1	109114	645197	8	1.35294	14.71	1.35294	14.705		
	Level 4	2	196877	608716	8	1.29372		1.29372			
	Level 5	5	531009	727635	8	1.16764		1.16764			
	Level 6	10	991022	674498	8	1.17542		1.17542			
	Level 7	20	1503864	551321	8	1.09110		1.09110			
	Level 8	40	3464674	695531	8	0.99627		0.99627			
	Level 9	50	4402010	714264	8	0.98608		0.98608			
	Level 10	70	6323672	780901	8	0.92548		0.92548			
	Level 11	80	6181304	691740	8	0.89359		0.89359			
Average RF						1.09803				1.09803	

PAH - polyaromatic hydrocarbons
 PCN - polychlorinated naphthalene
 RF - response factor
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	15.20	--	LR - r ² =0.99422
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	165690	1073873	8	1.23434		--	
	Level 4	2	303110	1010773	8	1.19952		--	
	Level 5	5	794548	1213524	8	1.04759		--	
	Level 6	10	1455344	1076401	8	1.08164		--	
	Level 7	20	2171811	836630	8	1.03836		--	
	Level 8	40	5172709	1143034	8	0.90508		--	
	Level 9	50	6435504	1175789	8	0.87574		--	
	Level 10	70	9188249	1264067	8	0.83072		--	
	Level 11	80	8964271	1079163	8	0.83067		--	
Average RF						1.00485			
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	10.81	--	10.809
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	--	--	8	--		--	
	Level 4	2	--	--	8	--		--	
	Level 5	5	783940	1213524	8	1.03360		1.0336	
	Level 6	10	1403511	1076401	8	1.04311		0.104311	
	Level 7	20	2133845	836630	8	1.02021		1.02021	
	Level 8	40	5205175	1143034	8	0.91076		0.91076	
	Level 9	50	6451365	1175789	8	0.87789		0.87789	
	Level 10	70	8973642	1264067	8	0.81132		0.81132	
	Level 11	80	8856846	1079163	8	0.82071		0.82071	
Average RF						0.93109		0.93109	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	19.37	--	19.370
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	181898	1073873	8	1.35508		1.35508	
	Level 4	2	330559	1010773	8	1.30814		1.30814	
	Level 5	5	907927	1213524	8	1.19708		1.19708	
	Level 6	10	1577740	1076401	8	1.17260		1.1726	
	Level 7	20	2342015	836630	8	1.11974		1.11974	
	Level 8	40	5508409	1143034	8	0.96382		0.96382	
	Level 9	50	7026166	1175789	8	0.95611		0.95611	
	Level 10	70	8101718	1264067	8	0.73249		0.73249	
	Level 11	80	9347997	1079163	8	0.86623		0.86623	
Average RF						1.07459		1.07459	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	9.63	--	9.631
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	--	--	8	--		--	
	Level 4	2	--	--	8	--		--	
	Level 5	5	941869	1164434	8	1.29418		1.29418	
	Level 6	10	1633130	923246	8	1.41512		1.41512	
	Level 7	20	2380665	689228	8	1.38164		1.38164	
	Level 8	40	5563605	799385	8	1.39197		1.39197	
	Level 9	50	7231643	903076	8	1.28125		1.28125	
	Level 10	70	7889410	540725	8	1.66748		1.66748	
	Level 11	80	9568308	738148	8	1.29626		1.29626	
Average RF						1.38970		1.3987	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	8.92	--	8.919
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	194672	1083577	8	1.43725		1.43725	
	Level 4	2	308012	944502	8	1.30444		1.30444	
	Level 5	5	907992	1164434	8	1.24763		1.24763	
	Level 6	10	1473489	923246	8	1.27679		1.27679	
	Level 7	20	2133260	689228	8	1.23806		1.23806	
	Level 8	40	4550147	799385	8	1.13841		1.13841	
	Level 9	50	6671924	903076	8	1.18208		1.18208	
	Level 10	70	5287818	540725	8	1.11761		1.11761	
	Level 11	80	8000376	738148	8	1.08384		1.08384	
Average RF						1.22513		1.22513	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	11.59	--	11.594
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	182593	1083577	8	1.34808		1.34808	
	Level 4	2	327348	944502	8	1.38633		1.38633	
	Level 5	5	834256	1164434	8	1.14632		1.14632	
	Level 6	10	1365537	923246	8	1.18325		1.18325	
	Level 7	20	1983430	689228	8	1.15110		1.15110	
	Level 8	40	4393019	799385	8	1.09910		1.09910	
	Level 9	50	5680650	903076	8	1.00645		1.00645	
	Level 10	70	5013363	540725	8	1.05961		1.05961	
	Level 11	80	7543665	738148	8	1.02197		1.02197	
Average RF						1.15580		1.1558	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	13.61	--	13.606
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	168391	1017063	8	1.32453		1.32453	
	Level 4	2	314499	757045	8	1.66172		1.66172	
	Level 5	5	838538	930058	8	1.44256		1.44256	
	Level 6	10	1525010	853611	8	1.42923		1.42923	
	Level 7	20	2068956	622129	8	1.33024		1.33024	
	Level 8	40	5407356	827700	8	1.30660		1.30660	
	Level 9	50	6239407	943907	8	1.05763		1.05763	
	Level 10	70	5705236	574580	8	1.13479		1.13479	
	Level 11	80	10068384	830969	8	1.21164		1.21164	
Average RF						1.32210		1.3221	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	22.59	--	22.592
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	212125	1017063	8	1.66853		1.66853	
	Level 4	2	288399	757045	8	1.52381		1.52381	
	Level 5	5	866443	930058	8	1.49056		1.49056	
	Level 6	10	1432057	853611	8	1.34212		1.34212	
	Level 7	20	2269790	622129	8	1.45937		1.45937	
	Level 8	40	4318777	827700	8	1.04356		1.04356	
	Level 9	50	5614685	943907	8	0.95174		0.95174	
	Level 10	70	5360319	574580	8	1.06618		1.06618	
	Level 11	80	7322623	830969	8	0.88121		0.88121	
Average RF						1.26968		1.26968	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	12.69	--	12.687
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	165542	1017063	8	1.30212		1.30212	
	Level 4	2	240082	757045	8	1.26852		1.26852	
	Level 5	5	681370	930058	8	1.17218		1.17218	
	Level 6	10	1260418	853611	8	1.18126		1.18126	
	Level 7	20	1801852	622129	8	1.15851		1.15851	
	Level 8	40	4177248	827700	8	1.00936		1.00936	
	Level 9	50	5777271	943907	8	0.97929		0.97929	
	Level 10	70	4936963	574580	8	0.98198		0.98198	
	Level 11	80	7543612	830969	8	0.90781		0.90781	
Average RF						1.10678		1.10678	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	13.67	--	13.668
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	175568	1017063	8	1.38098		1.38098	
	Level 4	2	236864	757045	8	1.25152		1.25152	
	Level 5	5	550099	930058	8	0.94635		0.94635	
	Level 6	10	1324194	853611	8	1.24103		1.24103	
	Level 7	20	1879874	622129	8	1.20867		1.20867	
	Level 8	40	4556135	827700	8	1.10091		1.10091	
	Level 9	50	5961240	943907	8	1.01048		1.01048	
	Level 10	70	5605180	574580	8	1.11489		1.11489	
	Level 11	80	7616862	830969	8	0.91662		0.91662	
Average RF						1.13016		1.13016	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	12.99	--	12.995
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	141780	1017063	8	1.11521		1.11521	
	Level 4	2	195560	757045	8	1.03328		1.03328	
	Level 5	5	447143	930058	8	0.76923		0.76923	
	Level 6	10	1073955	853611	8	1.00651		1.00651	
	Level 7	20	1532119	622129	8	0.98508		0.98508	
	Level 8	40	3769311	827700	8	0.91079		0.91079	
	Level 9	50	4941991	943907	8	0.83771		0.83771	
	Level 10	70	4712813	574580	8	0.93739		0.93739	
	Level 11	80	6340414	830969	8	0.76301		0.76301	
Average RF						0.92869		0.92869	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	11.85	--	11.850
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	145036	1017063	8	1.14082		1.14082	
	Level 4	2	193985	757045	8	1.02496		1.02496	
	Level 5	5	441178	930058	8	0.75897		0.75897	
	Level 6	10	1130411	853611	8	1.05942		1.05942	
	Level 7	20	1635170	622129	8	1.05134		1.05134	
	Level 8	40	4207815	827700	8	1.01675		1.01675	
	Level 9	50	5573195	943907	8	0.94470		0.94470	
	Level 10	70	5366161	574580	8	1.06735		1.06735	
	Level 11	80	7178310	830969	8	0.86385		0.86385	
Average RF						0.99202		0.99202	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 4/25/2007

SDG: 500-4317

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	94495	741001	8	1.02019		1.02019	
	Level 4	2	173337	679479	8	1.02041		1.02041	
	Level 5	5	530588	843117	8	1.00691		1.00691	
	Level 6	10	870020	680031	8	1.02351	3.64	1.02351	3.64
	Level 7	20	2610184	1008536	8	1.03524		1.03524	
	Level 8	40	4171435	773422	8	1.07870		1.0787	
	Level 9	50	6005039	874028	8	1.09929		1.09929	
	Level 10	70	7130348	738494	8	1.10346		1.10346	
	Level 11	80	5741704	529750	8	1.08385		1.08385	
Average RF						1.05239		1.05239	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	106557	458740	8	1.85826		1.85826	
	Level 4	2	200016	435562	8	1.83685		1.83685	
	Level 5	5	614321	523151	8	1.87883		1.87883	
	Level 6	10	1032483	428586	8	1.92724	4.08	1.92724	4.077
	Level 7	20	2958142	601650	8	1.96669		1.96669	
	Level 8	40	4791058	475274	8	2.01612		2.01612	
	Level 9	50	6810673	531910	8	2.04867		2.04867	
	Level 10	70	8275023	465070	8	2.03349		2.03349	
	Level 11	80	6422830	321085	8	2.00035		2.00035	
Average RF						1.95183		1.95183	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	61997	458740	8	1.08117		1.08117	
	Level 4	2	116786	435562	8	1.07251		1.07521	
	Level 5	5	348142	523151	8	1.06475		1.06475	
	Level 6	10	579809	428586	8	1.08227	2.84	1.08227	2.836
	Level 7	20	1641307	601650	8	1.09120		1.0912	
	Level 8	40	2674501	475274	8	1.12546		1.12546	
	Level 9	50	3807526	531910	8	1.14531		1.14531	
	Level 10	70	4650677	465070	8	1.14285		1.14285	
	Level 11	80	3614525	321085	8	1.12572		1.12572	
Average RF						1.10347		1.10347	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	74181	458740	8	1.29365		1.29365	
	Level 4	2	151218	435562	8	1.38872		1.38872	
	Level 5	5	457730	523151	8	1.39992		1.39992	
	Level 6	10	749143	428586	8	1.39835	4.22	1.39835	4.218
	Level 7	20	2189818	601650	8	1.45588		1.45588	
	Level 8	40	3474092	475274	8	1.46193		1.46193	
	Level 9	50	4991537	531910	8	1.50147		1.50147	
	Level 10	70	5895849	465070	8	1.44884		1.44884	
	Level 11	80	4500300	321085	8	1.40159		1.40159	
Average RF						1.41670		1.4167	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	4.71	--	4.712
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	118563	809007	8	1.17243		1.17243	
	Level 4	2	231385	792446	8	1.16795		1.16795	
	Level 5	5	710481	958840	8	1.18557		1.18557	
	Level 6	10	1129083	746028	8	1.21077		1.21077	
	Level 7	20	3363289	1087777	8	1.23676		1.23676	
	Level 8	40	5317592	840754	8	1.26496		1.26496	
	Level 9	50	7894505	963933	8	1.31038		1.31038	
	Level 10	70	8992392	779615	8	1.31822		1.31822	
	Level 11	80	6651791	517722	8	1.28482		1.28482	
Average RF						1.23909		1.23909	
Anthracene	Level 1	0.1	--	--	8	--	2.08	--	2.075
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	122251	809007	8	1.20890		1.2089	
	Level 4	2	229511	792446	8	1.15849		1.15849	
	Level 5	5	710255	958840	8	1.18519		1.18519	
	Level 6	10	1149907	746028	8	1.23310		1.2331	
	Level 7	20	3379631	1087777	8	1.24277		1.24277	
	Level 8	40	5117305	840754	8	1.21731		1.21731	
	Level 9	50	7217424	963933	8	1.19800		1.198	
	Level 10	70	8267296	779615	8	1.21192		1.21192	
	Level 11	80	6272618	517722	8	1.21158		1.21158	
Average RF						1.20747		1.20747	
Fluoranthene	Level 1	0.1	--	--	8	--	3.92	--	3.922
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	126614	809007	8	1.25204		1.25204	
	Level 4	2	249161	792446	8	1.25768		1.25768	
	Level 5	5	769503	958840	8	1.28406		1.28406	
	Level 6	10	1235609	746028	8	1.32500		1.325	
	Level 7	20	3737832	1087777	8	1.37448		1.37448	
	Level 8	40	5866887	840754	8	1.39563		1.39563	
	Level 9	50	7952907	963933	8	1.32008		1.32008	
	Level 10	70	8921574	779615	8	1.30784		1.30784	
	Level 11	80	7109863	517722	8	1.37330		1.3733	
Average RF						1.32112		1.32112	
Pyrene	Level 1	0.1	--	--	8	--	3.11	--	3.108
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	138622	800624	8	1.38514		1.38514	
	Level 4	2	256098	721543	8	1.41972		1.41972	
	Level 5	5	809843	926497	8	1.39855		1.39855	
	Level 6	10	1257144	716045	8	1.40454		1.40454	
	Level 7	20	3886062	1138595	8	1.36521		1.36521	
	Level 8	40	6007226	867040	8	1.38569		1.38569	
	Level 9	50	8376696	1012497	8	1.32373		1.32373	
	Level 10	70	8788600	775944	8	1.29444		1.29444	
	Level 11	80	7378103	520313	8	1.41801		1.41801	
Average RF						1.37723		1.37723	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	2.20	--	2.2
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	130897	800624	8	1.30795		1.30795	
	Level 4	2	233431	721543	8	1.29407		1.29407	
	Level 5	5	748989	926497	8	1.29346		1.29346	
	Level 6	10	1137102	716045	8	1.27043		1.27043	
	Level 7	20	3783792	1138595	8	1.32928		1.32928	
	Level 8	40	5748125	867040	8	1.32592		1.32592	
	Level 9	50	8686958	1012497	8	1.37276		1.37276	
	Level 10	70	8974726	775944	8	1.32185		1.32185	
	Level 11	80	6880703	520313	8	1.32242		1.32242	
Average RF						1.31535		1.31535	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	2.51	--	2.51
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	123157	800624	8	1.23061		1.23061	
	Level 4	2	216504	721543	8	1.20023		1.20023	
	Level 5	5	718598	926497	8	1.24097		1.24097	
	Level 6	10	1080645	716045	8	1.20735		1.20735	
	Level 7	20	3402768	1138595	8	1.19543		1.19543	
	Level 8	40	5361306	867040	8	1.23669		1.23669	
	Level 9	50	7382514	1012497	8	1.16662		1.16662	
	Level 10	70	7866467	775944	8	1.15862		1.15862	
	Level 11	80	6408510	520313	8	1.23166		1.23166	
Average RF						1.20758		1.20758	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	11.09	--	11.095
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	124209	775017	8	1.28213		1.2813	
	Level 4	2	194359	680515	8	1.14242		1.14242	
	Level 5	5	721171	873969	8	1.32027		1.32027	
	Level 6	10	1114555	665306	8	1.34020		1.3402	
	Level 7	20	3712863	1072261	8	1.38506		1.38506	
	Level 8	40	5599191	804844	8	1.39137		1.39137	
	Level 9	50	9539255	927488	8	1.64561		1.64561	
	Level 10	70	8145668	607465	8	1.53249		1.53249	
	Level 11	80	7248574	465635	8	1.55671		1.55671	
Average RF						1.39958		1.39958	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	7.44	--	7.443
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	119657	775017	8	1.23514		1.23514	
	Level 4	2	226764	680515	8	1.33290		1.3392	
	Level 5	5	684137	873969	8	1.25247		1.25247	
	Level 6	10	1089384	665306	8	1.30993		1.37543	
	Level 7	20	3687049	1072261	8	1.37543		1.37543	
	Level 8	40	5734868	804844	8	1.42509		1.42509	
	Level 9	50	7644060	927488	8	1.31867		1.31867	
	Level 10	70	8355846	607465	8	1.57203		1.57203	
	Level 11	80	6364714	465635	8	1.36689		1.36689	
Average RF						1.35428		1.35428	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	7.22	--	7.224
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	104884	775017	8	1.08265		1.80265	
	Level 4	2	181200	680515	8	1.06508		1.06508	
	Level 5	5	601851	873969	8	1.10183		1.10183	
	Level 6	10	952407	665306	8	1.14523		1.14523	
	Level 7	20	3180395	1072261	8	1.18643		1.18643	
	Level 8	40	4893347	804844	8	1.21597		1.21597	
	Level 9	50	7323485	927488	8	1.26337		1.26337	
	Level 10	70	6911573	607465	8	1.30031		1.30031	
	Level 11	80	5833661	465635	8	1.25284		1.25284	
Average RF						1.17930		1.1793	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	9.70	--	9.698
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	116759	775017	8	1.20523		1.20523	
	Level 4	2	197788	680515	8	1.16258		1.16258	
	Level 5	5	669815	873969	8	1.22625		1.22625	
	Level 6	10	1109148	665306	8	1.33370		1.3337	
	Level 7	20	3834494	1072261	8	1.43043		1.43043	
	Level 8	40	5854899	804844	8	1.45492		1.42492	
	Level 9	50	8766407	927488	8	1.51228		1.51228	
	Level 10	70	7725383	607465	8	1.45342		1.45342	
	Level 11	80	6842098	465635	8	1.46941		1.46941	
Average RF						1.36091		1.36091	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	11.55	--	11.55
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	96218	775017	8	0.99320		0.9932	
	Level 4	2	158115	680515	8	0.92938		0.92938	
	Level 5	5	526545	873969	8	0.96396		0.96396	
	Level 6	10	892223	665306	8	1.07286		1.07286	
	Level 7	20	3172386	1072261	8	1.18344		1.18344	
	Level 8	40	4840230	804844	8	1.20277		1.20277	
	Level 9	50	7393136	927488	8	1.27538		1.27538	
	Level 10	70	6445738	607465	8	1.21267		1.21267	
	Level 11	80	5697605	465635	8	1.22362		1.22362	
Average RF						1.11748		1.11748	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	5.85	--	5.85
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	102606	775017	8	1.05914		1.05914	
	Level 4	2	171032	680515	8	1.00531		1.00531	
	Level 5	5	581300	873969	8	1.06420		1.0642	
	Level 6	10	928313	665306	8	1.11625		1.11625	
	Level 7	20	3097787	1072261	8	1.15561		1.15531	
	Level 8	40	4692023	804844	8	1.16595		1.16595	
	Level 9	50	6937732	927488	8	1.19682		1.19682	
	Level 10	70	6135667	607465	8	1.15434		1.15434	
	Level 11	80	5513032	465635	8	1.18398		1.18398	
Average RF						1.12240		1.1224	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 5/14/2007SDG: 500-4270, 500-4427, 500-4472RF = $\frac{As \cdot Cis}{Ais \cdot Cs}$ where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--	9.79	--	9.793
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	122277	979926	8	0.99825		0.99825	
	Level 4	2	266959	1094808	8	0.97536		0.97536	
	Level 5	5	520099	867810	8	0.95892		0.95892	
	Level 6	10	1520626	1292154	8	0.94145		0.94145	
	Level 7	20	1734665	755145	8	0.91885		0.91885	
	Level 8	40	3713113	853012	8	0.87059		0.87059	
	Level 9	50	6188556	1208622	8	0.81925		0.81925	
	Level 10	70	8226825	1220162	8	0.77056		0.77056	
	Level 11	80	8272453	1072822	8	0.77109		0.77109	
Average RF						0.89159		0.89159	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Acenaphthylene	Level 1	0.1	--	--	8	--	6.67	--	6.667
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	129240	517052	8	1.99964		1.99964	
	Level 4	2	285624	590693	8	1.93416		1.93416	
	Level 5	5	559153	444393	8	2.01318		2.01318	
	Level 6	10	1742487	695010	8	2.00571		2.00571	
	Level 7	20	1891758	395945	8	1.91113		1.91113	
	Level 8	40	4286307	461215	8	1.85870		1.8587	
	Level 9	50	6994071	624570	8	1.79171		1.79171	
	Level 10	70	9563707	641239	8	1.70451		1.70451	
	Level 11	80	9390317	554437	8	1.69367		1.69367	
Average RF						1.87916		1.87916	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Acenaphthene	Level 1	0.1	--	--	8	--	4.81	--	4.811
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	72934	517052	8	1.12846		1.12846	
	Level 4	2	162877	590693	8	1.10296		1.10296	
	Level 5	5	313280	444393	8	1.12794		1.12794	
	Level 6	10	949200	695010	8	1.09259		1.09259	
	Level 7	20	1052232	395945	8	1.06301		1.06301	
	Level 8	40	2447174	461215	8	1.06119		1.06119	
	Level 9	50	4065979	624570	8	1.04161		1.04161	
	Level 10	70	5557078	641239	8	0.99042		0.99042	
	Level 11	80	5520089	554437	8	0.99562		0.99562	
Average RF						1.06709		1.06709	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluorene	Level 1	0.1	--	--	8	--	8.21	--	8.209
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	86364	517052	8	1.33625		1.33625	
	Level 4	2	196809	590693	8	1.33273		1.33273	
	Level 5	5	364905	444393	8	1.31381		1.31381	
	Level 6	10	1127251	695010	8	1.29754		1.29754	
	Level 7	20	1214437	395945	8	1.22687		1.22687	
	Level 8	40	2811505	461215	8	1.21917		1.21917	
	Level 9	50	4534432	624570	8	1.16161		1.16161	
	Level 10	70	6131646	641239	8	1.09282		1.09282	
	Level 11	80	5955869	554437	8	1.07422		1.07422	
Average RF						1.22834		1.22834	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	4.46	--	4.459
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	128519	856791	8	1.20000		1.2	
	Level 4	2	291163	1002606	8	1.16162		1.16162	
	Level 5	5	530774	731105	8	1.16158		1.16158	
	Level 6	10	1685657	1177132	8	1.14560		1.1456	
	Level 7	20	1712763	604910	8	1.13257		1.13257	
	Level 8	40	4165580	771759	8	1.07950		1.0795	
	Level 9	50	7087458	1049960	8	1.08003		1.08003	
	Level 10	70	9758875	1063663	8	1.04855		1.04855	
	Level 11	80	9674994	827523	8	1.16915		1.16915	
Average RF						1.13096		1.13096	
Anthracene	Level 1	0.1	--	--	8	--	6.39	--	6.394
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	123898	856791	8	1.15686		1.15689	
	Level 4	2	286679	1002606	8	1.14374		1.14374	
	Level 5	5	527437	731105	8	1.15428		1.15428	
	Level 6	10	1673696	1177132	8	1.13747		1.13747	
	Level 7	20	1695674	604910	8	1.12127		1.12127	
	Level 8	40	4215527	771759	8	1.09245		1.09245	
	Level 9	50	6639518	1049960	8	1.01177		1.01177	
	Level 10	70	9063844	1063663	8	0.97387		0.97387	
	Level 11	80	8460822	827523	8	1.02243		1.02243	
Average RF						1.09046		1.09046	
Fluoranthene	Level 1	0.1	--	--	8	--	7.56	--	7.558
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	128507	856791	8	1.19989		1.1989	
	Level 4	2	296039	1002606	8	1.18108		1.18108	
	Level 5	5	552955	731105	8	1.21012		1.21012	
	Level 6	10	1816278	1177132	8	1.23438		1.23438	
	Level 7	20	1751599	604910	8	1.15825		1.15825	
	Level 8	40	4176195	771759	8	1.08225		1.08225	
	Level 9	50	6783309	1049960	8	1.03369		1.03369	
	Level 10	70	9466336	1063663	8	1.01711		1.01711	
	Level 11	80	8596207	827523	8	1.03879		1.03879	
Average RF						1.12840		1.1284	
Pyrene	Level 1	0.1	--	--	8	--	13.95	--	13.945
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	136593	764287	8	1.42976		1.42976	
	Level 4	2	325032	899630	8	1.44518		1.44518	
	Level 5	5	569029	654450	8	1.39116		1.39116	
	Level 6	10	1852040	1071773	8	1.38241		1.38241	
	Level 7	20	1776894	533636	8	1.33191		1.33191	
	Level 8	40	4227470	650852	8	1.29906		1.29906	
	Level 9	50	6925898	1022388	8	1.08388		1.08388	
	Level 10	70	9412571	1052122	8	1.02243		1.02243	
	Level 11	80	8912274	879521	8	1.01331		1.01331	
Average RF						1.26657		1.26657	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	8.81	--	8.813
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	125283	764287	8	1.31137		1.31137	
	Level 4	2	293838	899630	8	1.30648		1.30648	
	Level 5	5	521542	654450	8	1.27507		1.27507	
	Level 6	10	1688736	1071773	8	1.26052		1.26052	
	Level 7	20	1634199	533636	8	1.22495		1.22495	
	Level 8	40	3552492	650852	8	1.09164		1.09164	
	Level 9	50	7332636	1022388	8	1.14753		1.1453	
	Level 10	70	9768959	1052122	8	1.06114		1.06114	
	Level 11	80	9266998	879521	8	1.05364		1.05364	
Average RF						1.19248		1.19248	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	10.65	--	10.654
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	118074	764287	8	1.23591		1.23591	
	Level 4	2	271719	899630	8	1.20814		1.20814	
	Level 5	5	484649	654450	8	1.18487		1.18487	
	Level 6	10	1584214	1071773	8	1.18250		1.1825	
	Level 7	20	1560235	533636	8	1.16951		1.16951	
	Level 8	40	3346226	650852	8	1.02826		1.02826	
	Level 9	50	6432998	1022388	8	1.00674		1.00674	
	Level 10	70	8658513	1052122	8	0.94052		0.94052	
	Level 11	80	8375974	879521	8	0.95233		0.95233	
Average RF						1.10098			
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	2.89	--	2.894
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	118072	752364	8	1.25548		1.25548	
	Level 4	2	288420	972920	8	1.18579		1.18579	
	Level 5	5	540056	691944	8	1.24879		1.24879	
	Level 6	10	1730247	1133404	8	1.22127		1.22127	
	Level 7	20	1786908	567470	8	1.25956		1.25956	
	Level 8	40	3853598	605582	8	1.27269		1.27269	
	Level 9	50	8472380	1111130	8	1.22000		1.22	
	Level 10	70	11317614	1078196	8	1.19963		1.9963	
	Level 11	80	11006925	939834	8	1.17116		1.17116	
Average RF						1.22604		1.22604	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	14.12	--	14.123
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	128512	752364	8	1.36649		1.36649	
	Level 4	2	315468	972920	8	1.29699		1.29699	
	Level 5	5	547703	691944	8	1.26647		1.26647	
	Level 6	10	1822859	1133404	8	1.28664		1.28664	
	Level 7	20	1714174	567470	8	1.20829		1.20829	
	Level 8	40	3433847	605582	8	1.13407		1.13407	
	Level 9	50	6962468	1111130	8	1.00258		1.00258	
	Level 10	70	8648839	1078196	8	0.91675		0.91675	
	Level 11	80	9045642	939834	8	0.96247		0.96247	
Average RF						1.16008		1.16008	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	#DIV/0!	--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1		752364	8	0.00000			
	Level 4	2		972920	8	0.00000			
	Level 5	5		691944	8	0.00000			
	Level 6	10		1133404	8	0.00000			
	Level 7	20		567470	8	0.00000			
	Level 8	40		605582	8	0.00000			
	Level 9	50		1111130	8	0.00000			
	Level 10	70		1078196	8	0.00000			
	Level 11	80		939834	8	0.00000			
Average RF						0.00000			
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	4.46	--	4.46
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	123750	752364	8	1.31585		1.31585	
	Level 4	2	304489	972920	8	1.25186		1.25186	
	Level 5	5	567542	691944	8	1.31234		1.31234	
	Level 6	10	1812969	1133404	8	1.27966		1.27966	
	Level 7	20	1812065	567470	8	1.27729		1.27729	
	Level 8	40	3796229	605582	8	1.25375		1.25375	
	Level 9	50	8360847	1111130	8	1.20394		1.20394	
	Level 10	70	10927589	1078196	8	1.15829		1.15829	
	Level 11	80	11122548	939834	8	1.18346		1.18346	
Average RF						1.24849		1.24849	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	1.68	--	1.684
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	99448	752364	8	1.05745		1.05745	
	Level 4	2	248127	972920	8	1.02013		1.02013	
	Level 5	5	457945	691944	8	1.05892		1.05892	
	Level 6	10	1501970	1133404	8	1.06015		1.06015	
	Level 7	20	1470862	567470	8	1.03679		1.03679	
	Level 8	40	3183637	605582	8	1.05143		1.05143	
	Level 9	50	7236970	1111130	8	1.04211		1.04211	
	Level 10	70	9541854	1078196	8	1.01141		1.01141	
	Level 11	80	9708497	939834	8	1.03300		1.03300	
Average RF						1.04126		1.04126	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	5.42	--	5.419
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	99986	752364	8	1.06317		83	
	Level 4	2	255039	972920	8	1.04855		1.04855	
	Level 5	5	472796	691944	8	1.09326		1.09326	
	Level 6	10	1521050	1133404	8	1.07362		1.07352	
	Level 7	20	1543278	567470	8	1.08783		1.08783	
	Level 8	40	3725532	605582	8	1.23040		1.2304	
	Level 9	50	7419093	1111130	8	1.06833		1.06833	
	Level 10	70	9735909	1078196	8	1.03198		1.03198	
	Level 11	80	9852705	939834	8	1.04835		1.04835	
Average RF						1.08283		1.08283	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
 Calibration Date: 7/10/2007
 SDG: 500-5635

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	112607	911033	8	0.98883		0.98883	
	Level 4	2	221785	924422	8	0.95967		0.95967	
	Level 5	5	593419	983948	8	0.96496		0.96496	
	Level 6	10	1409095	1197634	8	0.94125	6.63	0.94125	6.62
	Level 7	20	2269461	997096	8	0.91043		0.91043	
	Level 8	40	2536823	542101	8	0.93592		0.93592	
	Level 9	50	3606007	640003	8	0.90150		0.90150	
	Level 10	70	7704352	1041085	8	0.84575		0.84575	
	Level 11	80	8569922	1072506	8	0.79906		0.79906	
Average RF						0.91637		0.91637	
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	127096	521071	8	1.95130		1.9513	
	Level 4	2	251025	520635	8	1.92861		1.92861	
	Level 5	5	680756	558356	8	1.95074		1.95074	
	Level 6	10	1655904	685626	8	1.93214	6.47	1.93214	6.474
	Level 7	20	2708713	562153	8	1.92738		1.92738	
	Level 8	40	2825595	291710	8	1.93726		1.93726	
	Level 9	50	3918918	339274	8	1.84814		1.84814	
	Level 10	70	8877997	597879	8	1.69705		1.69705	
	Level 11	80	9846925	604652	8	1.62853		1.62853	
Average RF						1.86680		1.8668	
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	73114	521071	8	1.12252		1.12252	
	Level 4	2	147314	520635	8	1.13180		1.1318	
	Level 5	5	385090	558356	8	1.10350		1.1035	
	Level 6	10	917583	685626	8	1.07065	5.94	1.07065	5.938
	Level 7	20	1506078	562153	8	1.07165		1.07165	
	Level 8	40	1563887	291710	8	1.07222		1.07222	
	Level 9	50	2191894	339274	8	1.03369		1.03369	
	Level 10	70	5069870	597879	8	0.96912		0.96912	
	Level 11	80	5765702	604652	8	0.95356		0.95356	
Average RF						1.05874		1.05874	
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	--	--	8	--		--	
	Level 4	2	182229	520635	8	1.40005		1.4005	
	Level 5	5	486079	558356	8	1.39289		1.39286	
	Level 6	10	1147158	685626	8	1.33852	11.57	1.33852	11.569
	Level 7	20	1866739	562153	8	1.32828		1.32828	
	Level 8	40	1805713	291710	8	1.23802		1.23802	
	Level 9	50	2498271	339274	8	1.17817		1.17817	
	Level 10	70	5382102	597879	8	1.02880		1.0288	
	Level 11	80	6435138	604652	8	1.06427		1.06427	
Average RF						1.24613		1.24627	

PAH - polyaromatic hydrocarbons
 PCN - polychlorinated naphthalene
 RF - response factor
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	6.49	--	6.492
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	140882	992579	8	1.13548		1.13548	
	Level 4	2	272708	968817	8	1.12594		1.12594	
	Level 5	5	732888	1036354	8	1.13149		1.13149	
	Level 6	10	1746265	1279897	8	1.09150		1.0915	
	Level 7	20	2700001	994416	8	1.08606		1.08606	
	Level 8	40	2387670	437453	8	1.09162		1.09162	
	Level 9	50	3265843	499092	8	1.04697		1.04697	
	Level 10	70	8225000	959376	8	0.97980		0.9798	
	Level 11	80	9752518	1040168	8	0.93759		0.93759	
Average RF						1.06961		1.06961	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	10.58	--	10.584
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	147488	992579	8	1.18873		1.18873	
	Level 4	2	284047	968817	8	1.17276		1.17276	
	Level 5	5	759453	1036354	8	1.17250		1.1725	
	Level 6	10	1803945	1279897	8	1.12756		1.12756	
	Level 7	20	2626564	994416	8	1.05653		1.05653	
	Level 8	40	2303799	437453	8	1.05328		1.05328	
	Level 9	50	3177641	499092	8	1.01870		1.0187	
	Level 10	70	7662791	959376	8	0.91283		0.91283	
	Level 11	80	9167034	1040168	8	0.88130		0.8813	
Average RF						1.06491		1.06491	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	10.87	--	10.87
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	171250	992579	8	1.38024		1.38024	
	Level 4	2	322236	968817	8	1.33043		1.33043	
	Level 5	5	901808	1036354	8	1.39228		1.39228	
	Level 6	10	2166537	1279897	8	1.35419		1.35419	
	Level 7	20	3065838	994416	8	1.23322		1.23322	
	Level 8	40	2756388	437453	8	1.26020		1.2302	
	Level 9	50	3751041	499092	8	1.20252		1.20252	
	Level 10	70	9003268	959376	8	1.07251		1.07251	
	Level 11	80	10483211	1040168	8	1.00784		1.00784	
Average RF						1.24816		1.24816	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	10.96	--	10.982
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	174153	1158116	8	1.20301		1.20301	
	Level 4	2	329224	1114015	8	1.18212		1.18212	
	Level 5	5	921649	1260686	8	1.16971		1.16971	
	Level 6	10	2254307	1601221	8	1.12629		1.12629	
	Level 7	20	3165049	1084069	8	1.16784		1.16784	
	Level 8	40	2875981	463479	8	1.24104		1.24104	
	Level 9	50	3845707	523950	8	1.17437		1.17437	
	Level 10	70	9057639	1120962	8	0.92346		0.93246	
	Level 11	80	10986650	1222141	8	0.89897		0.89897	
Average RF						1.12076		1.12076	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	3.53	--	3.531
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	157400	1158116	8	1.08728		1.08728	
	Level 4	2	301306	1114015	8	1.08187		1.08187	
	Level 5	5	858933	1260686	8	1.09012		1.09012	
	Level 6	10	2207168	1601221	8	1.10274		1.10274	
	Level 7	20	2889213	1084069	8	1.06606		1.06606	
	Level 8	40	2684233	463479	8	1.15830		1.1583	
	Level 9	50	3560970	523950	8	1.08742		1.08742	
	Level 10	70	10272302	1120962	8	1.04729		1.04729	
	Level 11	80	12465022	1222141	8	1.01993		1.01993	
Average RF						1.08234		1.08234	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	7.12	--	7.123
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	155942	1158116	8	1.07721		1.07721	
	Level 4	2	309522	1114015	8	1.11137		1.11137	
	Level 5	5	871788	1260686	8	1.10643		1.10643	
	Level 6	10	2177037	1601221	8	1.08769		1.08769	
	Level 7	20	2881675	1084069	8	1.06328		1.06328	
	Level 8	40	2534233	463479	8	1.09357		1.09357	
	Level 9	50	3481641	523950	8	1.06320		1.0623	
	Level 10	70	9018247	1120962	8	0.91944		0.91944	
	Level 11	80	11272212	1222141	8	0.92233		.92233+	
Average RF						1.04939		1.04939	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	5.48	--	5.483
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	158685	1087718	8	1.16710		1.1671	
	Level 4	2	301402	1068575	8	1.12824		1.12824	
	Level 5	5	977730	1277923	8	1.22415		1.22415	
	Level 6	10	2360039	1657028	8	1.13941		1.13941	
	Level 7	20	2987223	1084069	8	1.10223		1.10223	
	Level 8	40	2627006	463479	8	1.13360		1.1336	
	Level 9	50	3825857	508882	8	1.20291		1.20291	
	Level 10	70	12972803	1252069	8	1.18412		1.18412	
	Level 11	80	18500040	1406884	8	1.31497		1.31497	
Average RF						1.17741		1.19817	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	13.22	--	13.221
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	181106	1087718	8	1.33201		1.33201	
	Level 4	2	390063	1068575	8	1.46012		1.46012	
	Level 5	5	989631	1277923	8	1.23905		1.23905	
	Level 6	10	2643178	1657028	8	1.27611		1.27611	
	Level 7	20	3493454	1084069	8	1.28902		1.28902	
	Level 8	40	3056559	463479	8	1.31896		1.3896	
	Level 9	50	3898588	508882	8	1.22577		1.22577	
	Level 10	70	10704634	1252069	8	0.97709		0.97709	
	Level 11	80	13553872	1406884	8	0.96340		0.9634	
Average RF						1.23128		1.23128	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	3.06	--	3.062
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	142286	1087718	8	1.04649		1.04649	
	Level 4	2	279066	1068575	8	1.04463		1.04463	
	Level 5	5	857484	1277923	8	1.07360		1.0736	
	Level 6	10	2214613	1657028	8	1.06920		1.0692	
	Level 7	20	2833074	1084069	8	1.04535		1.04535	
	Level 8	40	2494724	463479	8	1.07652		1.07652	
	Level 9	50	3387566	508882	8	1.06510		1.0651	
	Level 10	70	11138877	1252069	8	1.01673		1.01673	
	Level 11	80	13746133	1406884	8	0.97706		0.97706	
Average RF						1.04608		1.04608	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	2.41	--	2.415
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	180276	1087718	8	1.32590		1.3259	
	Level 4	2	366809	1068575	8	1.37308		1.37308	
	Level 5	5	1064693	1277923	8	1.33303		1.33303	
	Level 6	10	2940609	1657028	8	1.41970		1.4167	
	Level 7	20	3729463	1084069	8	1.37610		1.3761	
	Level 8	40	3235221	463479	8	1.39606		1.39606	
	Level 9	50	4326339	508882	8	1.36026		1.3602	
	Level 10	70	14576217	1252069	8	1.33048		1.33048	
	Level 11	80	18801523	1406884	8	1.33639		1.33639	
Average RF						1.36122		1.36122	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	3.25	--	3.248
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	150244	1087718	8	1.10502		1.10502	
	Level 4	2	305280	1068575	8	1.14276		1.14276	
	Level 5	5	888720	1277923	8	1.11271		1.11271	
	Level 6	10	2428766	1657028	8	1.17259		1.17259	
	Level 7	20	3138648	1084069	8	1.15810		1.1581	
	Level 8	40	2693844	463479	8	1.16244		1.16244	
	Level 9	50	3553596	508882	8	1.11730		1.1173	
	Level 10	70	11804283	1252069	8	1.07747		1.07747	
	Level 11	80	15091800	1406884	8	1.07271		1.07271	
Average RF						1.12457		1.12457	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	6.86	--	6.864
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	153980	1087718	8	1.13250		1.1325	
	Level 4	2	295702	1068575	8	1.10690		1.1069	
	Level 5	5	890804	1277923	8	1.11531		1.11531	
	Level 6	10	2424275	1657028	8	1.17042		1.17042	
	Level 7	20	3128831	1084069	8	1.15448		1.15448	
	Level 8	40	2705866	463479	8	1.16763		1.16763	
	Level 9	50	3667371	508882	8	1.15308		1.15308	
	Level 10	70	12398784	1252069	8	1.13173		1.13173	
	Level 11	80	12962169	1406884	8	0.92134		0.92134	
Average RF						1.11704		1.11704	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 1/29/2007

SDG: 250165, 250195

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	159693	1221615	8	1.04578		1.04578	
	Level 4	2	262624	1051837	8	0.99873		0.98873	
	Level 5	5	530159	989403	8	0.85734		0.85734	
	Level 6	10	1691474	1474076	8	0.91798	7.91	0.91798	7.912
	Level 7	20	3199164	1407041	8	0.90947		0.90947	
	Level 8	40	6058714	1417632	8	0.85477		0.85477	
	Level 9	50	7295164	1355706	8	0.86097		0.86097	
	Level 10	70	10873600	1464415	8	0.84860		0.8486	
	Level 11	80	11515349	1344824	8	0.85627		0.85627	
Average RF						0.90555		0.90555	
Acenaphthylene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	155380	603019	8	2.06136		2.06136	
	Level 4	2	262528	521925	8	2.01200		1.012	
	Level 5	5	570969	519880	8	1.75723		1.75723	
	Level 6	10	1804247	769671	8	1.87534	5.87	1.87534	5.867
	Level 7	20	3451853	742257	8	1.86019		1.86019	
	Level 8	40	6752342	746399	8	1.80931		1.80931	
	Level 9	50	7957459	717409	8	1.77471		1.77471	
	Level 10	70	11982556	760136	8	1.80157		1.80157	
	Level 11	80	12590068	709728	8	1.77393		1.77393	
Average RF						1.85841		1.85841	
Acenaphthene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	86803	603019	8	1.15158		1.15158	
	Level 4	2	141740	521925	8	1.08629		1.06829	
	Level 5	5	319832	519880	8	0.98433		0.98433	
	Level 6	10	976047	769671	8	1.01451	6.37	1.01451	6.371
	Level 7	20	1868475	742257	8	1.00692		1.00692	
	Level 8	40	3642948	746399	8	0.97614		0.97614	
	Level 9	50	4329364	717409	8	0.96556		0.96556	
	Level 10	70	6468452	760136	8	0.97253		0.97253	
	Level 11	80	6823812	709728	8	0.96147		0.96147	
Average RF						1.01326		1.10326	
Fluorene	Level 1	0.1	--	--	8	--		--	
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	98693	603019	8	1.30932		1.30932	
	Level 4	2	170951	521925	8	1.31016		1.31016	
	Level 5	5	369042	519880	8	1.13578		1.13578	
	Level 6	10	1141394	769671	8	1.18637	5.97	1.18637	5.971
	Level 7	20	2191501	742257	8	1.18099		1.18099	
	Level 8	40	4306282	746399	8	1.15388		1.15388	
	Level 9	50	5107792	717409	8	1.13916		1.13916	
	Level 10	70	7654552	760136	8	1.15085		1.15085	
	Level 11	80	8044877	709728	8	1.13352		1.13352	
Average RF						1.18889		1.18889	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	0.1	--	--	8	--	6.49	--	6.488
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	161032	986926	8	1.30532		1.30532	
	Level 4	2	263388	850935	8	1.23811		1.23811	
	Level 5	5	569915	825254	8	1.10495		1.10495	
	Level 6	10	1768659	1227788	8	1.15242		1.15242	
	Level 7	20	3470302	1215394	8	1.14212		1.14212	
	Level 8	40	6833786	1220574	8	1.11977		1.11977	
	Level 9	50	8220645	1165611	8	1.12842		1.12842	
	Level 10	70	11821877	1263655	8	1.06918		1.06918	
	Level 11	80	12362899	1125999	8	1.09795		1.09795	
Average RF						1.15091		1.15091	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	0.1	--	--	8	--	10.74	--	10.737
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	169600	986926	8	1.37477		1.37477	
	Level 4	2	249681	850935	8	1.17368		1.17368	
	Level 5	5	555286	825254	8	1.07659		1.07659	
	Level 6	10	1706624	1227788	8	1.11200		1.112	
	Level 7	20	3377500	1215394	8	1.11157		1.11157	
	Level 8	40	6293370	1220574	8	1.03121		1.03121	
	Level 9	50	7646951	1165611	8	1.04967		1.04967	
	Level 10	70	10848133	1263655	8	0.98111		0.98111	
	Level 11	80	11326601	1125999	8	1.00592		1.00592	
Average RF						1.10184		1.10184	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	0.1	--	--	8	--	9.56	--	9.56
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	163245	986926	8	1.32326		1.32326	
	Level 4	2	261882	850935	8	1.23103		1.23103	
	Level 5	5	549636	825254	8	1.06563		1.06563	
	Level 6	10	1702534	1227788	8	1.10933		1.10933	
	Level 7	20	3458333	1215394	8	1.13818		1.13818	
	Level 8	40	6647217	1220574	8	1.08920		1.0892	
	Level 9	50	7976278	1165611	8	1.09488		1.09488	
	Level 10	70	10780376	1263655	8	0.97498		0.97498	
	Level 11	80	11403455	1125999	8	1.01274		1.01274	
Average RF						1.11547		1.11547	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	0.1	--	--	8	--	11.28	--	11.283
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	177897	915423	8	1.55466		1.55466	
	Level 4	2	275495	778017	8	1.41640		1.41614	
	Level 5	5	569521	697446	8	1.30653		1.30653	
	Level 6	10	1823624	1102052	8	1.32380		1.3238	
	Level 7	20	3565746	1085309	8	1.31419		1.31419	
	Level 8	40	6747196	1072725	8	1.25795		1.25795	
	Level 9	50	8175393	1047876	8	1.24830		1.2483	
	Level 10	70	10801861	1123237	8	1.09905		1.09905	
	Level 11	80	11220803	1034322	8	1.08485		1.08485	
Average RF						1.28953		1.28953	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	--	--	8	--	5.84	--	5.838
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	166004	915423	8	1.45073		1.45073	
	Level 4	2	257290	778017	8	1.32280		1.32280	
	Level 5	5	512813	697446	8	1.17644		1.17644	
	Level 6	10	1734639	1102052	8	1.25921		1.25921	
	Level 7	20	3511646	1085309	8	1.29425		1.29425	
	Level 8	40	6942335	1072725	8	1.29434		1.29434	
	Level 9	50	8474006	1047876	8	1.29389		1.29389	
	Level 10	70	12121556	1123237	8	1.23333		1.23333	
	Level 11	80	12981811	1034322	8	1.25510		1.25510	
Average RF						1.28668		1.28668	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	0.1	--	--	8	--	10.05	--	10.049
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	159361	915423	8	1.39268		1.39268	
	Level 4	2	257290	778017	8	1.32280		1.32280	
	Level 5	5	479899	697446	8	1.10093		1.10093	
	Level 6	10	1650318	1102052	8	1.19800		1.19800	
	Level 7	20	3184085	1085309	8	1.17352		1.17352	
	Level 8	40	6254409	1072725	8	1.16608		1.16608	
	Level 9	50	7400125	1047876	8	1.12992		1.12992	
	Level 10	70	10368813	1123237	8	1.05499		1.05499	
	Level 11	80	10700199	1034322	8	1.03451		1.03451	
Average RF						1.17483		1.17483	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	--	--	8	--	9.63	--	9.628
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	157449	883186	8	1.42619		1.42619	
	Level 4	2	265788	749130	8	1.41918		1.41618	
	Level 5	5	481841	639434	8	1.20567		1.20567	
	Level 6	10	1745233	1058279	8	1.31930		1.31930	
	Level 7	20	3600576	1053605	8	1.36695		1.36695	
	Level 8	40	7711753	1049345	8	1.46982		1.46982	
	Level 9	50	9376284	1016942	8	1.47521		1.47521	
	Level 10	70	14893781	1072703	8	1.58678		1.58678	
	Level 11	80	16278052	973009	8	1.67296		1.67296	
Average RF						1.43801		1.43801	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	--	--	8	--	11.48	--	11.478
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	163200	883186	8	1.47828		1.47828	
	Level 4	2	271417	749130	8	1.44924		1.44924	
	Level 5	5	506687	639434	8	1.26784		1.26784	
	Level 6	10	1723273	1058279	8	1.30270		1.30270	
	Level 7	20	3384824	1053605	8	1.28504		1.28504	
	Level 8	40	6374475	1049345	8	1.21494		1.21494	
	Level 9	50	7447033	1016942	8	1.17167		1.17167	
	Level 10	70	9556802	1072703	8	1.01818		1.01818	
	Level 11	80	11155545	973009	8	1.14650		1.14650	
Average RF						1.25938		1.25938	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	--	--	8	--	5.59	--	5.593
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	149121	883186	8	1.35076		1.35076	
	Level 4	2	229931	749130	8	1.22772		1.22772	
	Level 5	5	438993	639434	8	1.09845		1.09845	
	Level 6	10	1562219	1058279	8	1.18095		1.18095	
	Level 7	20	3113724	1053605	8	1.18212		1.18212	
	Level 8	40	6264096	1049345	8	1.19391		1.19391	
	Level 9	50	7466123	1016942	8	1.17468		1.17468	
	Level 10	70	11485505	1072703	8	1.22367		1.22367	
	Level 11	80	12025033	973009	8	1.23586		1.23586	
Average RF						1.20757		1.20757	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	--	--	8	--	4.93	--	4.931
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	172609	883186	8	1.56351		1.56351	
	Level 4	2	279885	749130	8	1.49445		1.49445	
	Level 5	5	524343	639434	8	1.31202		1.31202	
	Level 6	10	1853265	1058279	8	1.40097		1.40097	
	Level 7	20	3732663	1053605	8	1.41710		1.41710	
	Level 8	40	7453191	1049345	8	1.42054		1.42054	
	Level 9	50	8849311	1016942	8	1.39230		1.39230	
	Level 10	70	13142710	1072703	8	1.40022		1.40022	
	Level 11	80	13692314	973009	8	1.40721		1.40721	
Average RF						1.42315		1.42315	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	--	--	8	--	5.27	--	5.268
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	144652	883186	8	1.31027		1.31027	
	Level 4	2	232449	749130	8	1.24117		1.24117	
	Level 5	5	430526	639434	8	1.07727		1.07727	
	Level 6	10	1540298	1058279	8	1.16438		1.16438	
	Level 7	20	3119785	1053605	8	1.18442		1.18442	
	Level 8	40	6217320	1049345	8	1.18499		1.18499	
	Level 9	50	7403445	1016942	8	1.16482		1.16482	
	Level 10	70	11026466	1072703	8	1.17476		1.17476	
	Level 11	80	11577463	973009	8	1.18986		1.18986	
Average RF						1.18799		1.18799	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	0.1	--	--	8	--	7.27	--	7.273
	Level 2	0.5	--	--	8	--		--	
	Level 3	1	145901	883186	8	1.32159		1.32159	
	Level 4	2	229957	749130	8	1.22786		1.22786	
	Level 5	5	435340	639434	8	1.08931		1.08931	
	Level 6	10	1483855	1058279	8	1.12171		1.12171	
	Level 7	20	3002484	1053605	8	1.13989		1.13989	
	Level 8	40	6079033	1049345	8	1.15863		1.15863	
	Level 9	50	7016321	1016942	8	1.10391		1.10391	
	Level 10	70	10040433	1072703	8	1.06971		1.06971	
	Level 11	80	10377747	973009	8	1.06656		1.06656	
Average RF						1.14435		1.14435	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
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%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 9/4/2007

SDG: 500-6713

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	--	--	--	8	--		--	
	Level 2	--	--	--	8	--		--	
	Level 3	1	176382	1392513	8	1.0133		1.0133	
	Level 4	2	256060	1031000	8	0.9934		0.9934	
	Level 5	5	512021	828792	8	0.9885		0.9885	
	Level 6	10	1721447	1380824	8	0.9973	3.85	0.9973	3.9
	Level 7	20	3160895	1225859	8	1.0314		1.0314	
	Level 8	40	2728469	536195	8	1.0177		1.0177	
	Level 9	50	7212500	1127526	8	1.0235		1.0235	
	Level 10	70	8932596	1126035	8	0.9066		0.9066	
	Level 11	80	6715181	695807	8	0.9651		0.9651	
Average RF						0.9930		0.9930	
Acenaphthylene	Level 1	--	--	--	8	--		--	
	Level 2	--	--	--	8	--		--	
	Level 3	1	181063	738603	8	1.9611		1.9611	
	Level 4	2	265529	527271	8	2.0144		2.0144	
	Level 5	5	541192	427742	8	2.0244		2.0244	
	Level 6	10	1865186	712996	8	2.0928	4.30	2.0928	4.3
	Level 7	20	3365124	626856	8	2.1473		2.1473	
	Level 8	40	2932969	274124	8	2.1399		2.1399	
	Level 9	50	7670554	577918	8	2.1236		2.1236	
	Level 10	70	9662096	582140	8	1.8969		1.8969	
	Level 11	80	7045807	354725	8	1.9863		1.9863	
Average RF						2.0430		2.043	
Acenaphthene	Level 1	--	--	--	8	--		--	
	Level 2	--	--	--	8	--		--	
	Level 3	1	106208	738603	8	1.1504		1.1504	
	Level 4	2	147335	527271	8	1.1177		1.1177	
	Level 5	5	303190	427742	8	1.1341		1.1341	
	Level 6	10	999706	712996	8	1.1217	1.77	1.1217	1.8
	Level 7	20	1789415	626856	8	1.1418		1.1418	
	Level 8	40	1590602	274124	8	1.1605		1.1605	
	Level 9	50	4176064	577918	8	1.1562		1.1562	
	Level 10	70	5997065	582140	8	1.1773		1.1773	
	Level 11	80	3983993	354725	8	1.1231		1.1231	
Average RF						1.1425		1.1425	
Fluorene	Level 1	--	--	--	8	--		--	
	Level 2	--	--	--	8	--		--	
	Level 3	1	134632	738603	8	1.4582		1.4582	
	Level 4	2	193495	527271	8	1.4679		1.4679	
	Level 5	5	355138	427742	8	1.3284		1.3284	
	Level 6	10	1233381	712996	8	1.3839	3.66	1.3839	3.7
	Level 7	20	2168959	626856	8	1.3840		1.374	
	Level 8	40	1920970	274124	8	1.4015		1.4015	
	Level 9	50	4997579	577918	8	1.3836		1.3836	
	Level 10	70	7105443	582140	8	1.3949		1.3949	
	Level 11	80	4656828	354725	8	1.3128		1.3127	
Average RF						1.3906		1.3906	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	--	--	--	8	--	4.15	--	4.2
	Level 2	--	--	--	8	--		--	
	Level 3	1	189446	1315490	8	1.1521		1.1521	
	Level 4	2	266430	963611	8	1.1060		1.106	
	Level 5	5	528733	741571	8	1.1408		1.1408	
	Level 6	10	1787462	1290962	8	1.1077		1.1077	
	Level 7	20	3126678	1107226	8	1.1296		1.1296	
	Level 8	40	2786473	482940	8	1.1540		1.154	
	Level 9	50	7543646	956869	8	1.2614		1.2614	
	Level 10	70	10247472	980831	8	1.1940		1.194	
	Level 11	80	6697764	574208	8	1.1664		1.1664	
Average RF						1.1569		1.1569	
Anthracene	Level 1	--	--	--	8	--	6.07	--	6.1
	Level 2	--	--	--	8	--		--	
	Level 3	1	191029	1315490	8	1.1617		1.1617	
	Level 4	2	235289	963611	8	0.9767		0.9769	
	Level 5	5	476698	741571	8	1.0285		1.0285	
	Level 6	10	1703848	1290962	8	1.0559		1.0559	
	Level 7	20	3016163	1107226	8	1.0896		1.0896	
	Level 8	40	2679043	482940	8	1.1095		1.1095	
	Level 9	50	6896138	956869	8	1.1531		1.1531	
	Level 10	70	8701183	980831	8	1.0139		1.0139	
	Level 11	80	6523238	574208	8	1.1360		1.136	
Average RF						1.0805		1.0805	
Fluoranthene	Level 1	--	--	--	8	--	4.40	--	4.4
	Level 2	--	--	--	8	--		--	
	Level 3	1	211351	1315490	8	1.2853		1.2853	
	Level 4	2	315123	963611	8	1.3081		1.3081	
	Level 5	5	608029	741571	8	1.3119		1.3119	
	Level 6	10	2073568	1290962	8	1.2850		1.285	
	Level 7	20	3753787	1107226	8	1.3561		1.3561	
	Level 8	40	3076270	482940	8	1.2740		1.274	
	Level 9	50	7994592	956869	8	1.3368		1.3368	
	Level 10	70	9926988	980831	8	1.1567		1.1567	
	Level 11	80	7314183	574208	8	1.2738		1.2738	
Average RF						1.2875		1.2875	
Pyrene	Level 1	--	--	--	8	--	10.71	--	10.7
	Level 2	--	--	--	8	--		--	
	Level 3	1	228662	1379391	8	1.3262		1.3262	
	Level 4	2	321678	995717	8	1.2922		1.2922	
	Level 5	5	644591	710544	8	1.4515		1.4515	
	Level 6	10	2204905	1296106	8	1.3609		1.3609	
	Level 7	20	3868661	1111070	8	1.3928		1.3928	
	Level 8	40	3230330	403139	8	1.6026		1.6026	
	Level 9	50	8305306	956282	8	1.3896		1.3896	
	Level 10	70	9882773	1071964	8	1.0536		1.0536	
	Level 11	80	7315041	520671	8	1.4049		1.4049	
Average RF						1.3638		1.3638	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	--	--	--	8	--	3.28	--	3.3
	Level 2	--	--	--	8	--		--	
	Level 3	1	199512	1379391	8	1.1571		1.1571	
	Level 4	2	278796	995717	8	1.1200		1.12	
	Level 5	5	499815	710544	8	1.1255		1.1255	
	Level 6	10	1855679	1296106	8	1.1454		1.1454	
	Level 7	20	3299332	1111070	8	1.1878		1.1878	
	Level 8	40	2317929	403139	8	1.1499		1.1499	
	Level 9	50	7239339	956282	8	1.2112		1.2112	
	Level 10	70	10192611	1071964	8	1.0867		1.0867	
	Level 11	80	6121409	520671	8	1.1757		1.1757	
Average RF						1.1510		1.151	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	--	--	--	8	--	4.96	--	5
	Level 2	--	--	--	8	--		--	
	Level 3	1	196503	1379391	8	1.1397		1.1397	
	Level 4	2	271353	995717	8	1.0901		1.0901	
	Level 5	5	477425	710544	8	1.0751		1.0751	
	Level 6	10	1750612	1296106	8	1.0805		1.0805	
	Level 7	20	3185125	1111070	8	1.1467		1.1467	
	Level 8	40	2209491	403139	8	1.0961		1.0961	
	Level 9	50	6817567	956282	8	1.1407		1.1407	
	Level 10	70	9127392	1071964	8	0.9731		0.9731	
	Level 11	80	5901264	520671	8	1.1334		1.1334	
Average RF						1.0973		1.0973	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	--	--	--	8	--	7.75	--	7.8
	Level 2	--	--	--	8	--		--	
	Level 3	1	181860	1290166	8	1.1277		1.1277	
	Level 4	2	303832	946378	8	1.2842		1.2742	
	Level 5	5	497779	575775	8	1.3833		1.3833	
	Level 6	10	1868699	1230275	8	1.2151		1.2151	
	Level 7	20	3350348	1046018	8	1.2812		1.2812	
	Level 8	40	2424667	358274	8	1.3535		1.3535	
	Level 9	50	8289646	906303	8	1.4635		1.4635	
	Level 10	70	12256691	1006476	8	1.3918		1.3918	
	Level 11	80	5937620	435241	8	1.3642		1.3642	
Average RF						1.3183		1.3183	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	--	--	--	8	--	5.74	--	5.7
	Level 2	--	--	--	8	--		--	
	Level 3	1	228580	1290166	8	1.4174		1.4174	
	Level 4	2	301677	946378	8	1.2751		1.2751	
	Level 5	5	492140	575775	8	1.3676		1.3676	
	Level 6	10	2066986	1230275	8	1.3441		1.3441	
	Level 7	20	3509014	1046018	8	1.3419		1.3419	
	Level 8	40	2272332	358274	8	1.2685		1.2685	
	Level 9	50	6961943	906303	8	1.2291		1.2291	
	Level 10	70	10988745	1006476	8	1.2478		1.2478	
	Level 11	80	6290485	435241	8	1.4453		1.4453	
Average RF						1.3263		1.3263	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	--	--	--	8	--	2.74	--	2.7
	Level 2	--	--	--	8	--		--	
	Level 3	1	181561	1290166	8	1.1258		1.1258	
	Level 4	2	265750	946378	8	1.1232		1.1232	
	Level 5	5	401145	575775	8	1.1147		1.1147	
	Level 6	10	1694512	1230275	8	1.1019		1.1019	
	Level 7	20	3023582	1046018	8	1.1562		1.1562	
	Level 8	40	2039151	358274	8	1.1383		1.1383	
	Level 9	50	6655642	906303	8	1.1750		1.175	
	Level 10	70	10292452	1006476	8	1.1687		1.1687	
	Level 11	80	5206251	435241	8	1.1962		1.1962	
Average RF						1.1445		1.1445	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	--	--	--	8	--	2.91	--	2.9
	Level 2	--	--	--	8	--		--	
	Level 3	1	217962	1290166	8	1.3515		1.3515	
	Level 4	2	309975	946378	8	1.3102		1.3102	
	Level 5	5	466908	575775	8	1.2975		1.2975	
	Level 6	10	2090190	1230275	8	1.3592		1.3592	
	Level 7	20	3650096	1046018	8	1.3958		1.3958	
	Level 8	40	2369493	358274	8	1.3227		1.3227	
	Level 9	50	8030143	906303	8	1.4177		1.4177	
	Level 10	70	11991882	1006476	8	1.3617		1.3617	
	Level 11	80	5985675	435241	8	1.3753		1.3753	
Average RF						1.3546		1.3546	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	--	--	--	8	--	3.70	--	3.7
	Level 2	--	--	--	8	--		--	
	Level 3	1	179399	1290166	8	1.1124		1.1124	
	Level 4	2	243630	946378	8	1.0297		1.0297	
	Level 5	5	372298	575775	8	1.0346		1.0346	
	Level 6	10	1698461	1230275	8	1.1044		1.1044	
	Level 7	20	2952607	1046018	8	1.1291		1.1291	
	Level 8	40	1911942	358274	8	1.0673		1.0673	
	Level 9	50	6496497	906303	8	1.1469		1.1469	
	Level 10	70	9666923	1006476	8	1.0977		1.0977	
	Level 11	80	4829888	435241	8	1.1097		1.1097	
Average RF						1.0924		1.0924	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	--	--	--	8	--	2.95	--	3
	Level 2	--	--	--	8	--		--	
	Level 3	1	189330	1290166	8	1.1740		1.174	
	Level 4	2	260859	946378	8	1.1026		1.1026	
	Level 5	5	394187	575775	8	1.0954		1.0954	
	Level 6	10	1760827	1230275	8	1.1450		1.145	
	Level 7	20	3098112	1046018	8	1.1847		1.1847	
	Level 8	40	2014155	358274	8	1.1244		1.1244	
	Level 9	50	6732267	906303	8	1.1885		1.1885	
	Level 10	70	9988719	1006476	8	1.1342		1.1342	
	Level 11	80	4975249	435241	8	1.1431		1.1431	
Average RF						1.1435		1.1435	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
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SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 9/27/2007

SDG: 500-7048

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	--	--	--	8	--		--	
	Level 2	--	--	--	8	--		--	
	Level 3	80	8455730	1223089	8	0.6913		0.6913	
	Level 4	70	6963630	1161706	8	0.6851		0.6851	
	Level 5	50	4942912	1056055	8	0.7489		0.7489	
	Level 6	40	3807424	939231	8	0.8108	13.7	0.8108	13.7
	Level 7	20	2371686	1095856	8	0.8657		0.86570	
	Level 8	10	1142878	1005357	8	0.9094		0.9094	
	Level 9	5	563217	936069	8	0.9627		0.9627	
	Level 10	2	219048	920376	8	0.9520		0.952	
	Level 11	1	123241	1005765	8	0.9803		0.9803	
Average RF						0.8451		0.8451	
Acenaphthylene	Level 1	--	--	--	8	--		--	
	Level 2	--	--	--	8	--		--	
	Level 3	80	9628962	658580	8	1.4621		1.4621	
	Level 4	70	7525127	604973	8	1.4216		1.4216	
	Level 5	50	5604026	580344	8	1.5450		1.545	
	Level 6	40	4204572	509951	8	1.6490	11.1	1.649	11.1
	Level 7	20	2643152	603230	8	1.7527		1.7527	
	Level 8	10	1226410	536941	8	1.8273		1.8273	
	Level 9	5	597066	505403	8	1.8902		1.8902	
	Level 10	2	233097	489406	8	1.9051		1.9051	
	Level 11	1	122742	528704	8	1.8573		1.8573	
Average RF						1.7011		1.7011	
Acenaphthene	Level 1	--	--	--	8	--		--	
	Level 2	--	--	--	8	--		--	
	Level 3	80	5824726	658580	8	0.8844		0.8844	
	Level 4	70	4649315	604973	8	0.8783		0.8783	
	Level 5	50	3378583	580344	8	0.9315		0.9315	
	Level 6	40	2502678	509951	8	0.9815	8.9	0.9815	8.9
	Level 7	20	1536796	603230	8	1.0190		1.019	
	Level 8	10	710360	536941	8	1.0584		1.0584	
	Level 9	5	338339	505403	8	1.0711		1.0711	
	Level 10	2	132789	489406	8	1.0853		1.0853	
	Level 11	1	74158	528704	8	1.1221		1.1221	
Average RF						1.0035		1.0035	
Fluorene	Level 1	--	--	--	8	--		--	
	Level 2	--	--	--	8	--		--	
	Level 3	80	6033672	658580	8	0.9162		0.9162	
	Level 4	70	4586824	604973	8	0.8665		0.8665	
	Level 5	50	3548700	580344	8	0.9784		0.9784	
	Level 6	40	2709156	509951	8	1.0625	15.3	1.0625	15.3
	Level 7	20	1698019	603230	8	1.1260		1.126	
	Level 8	10	821767	536941	8	1.2244		1.2244	
	Level 9	5	396167	505403	8	1.2542		1.2542	
	Level 10	2	163394	489406	8	1.3354		1.3354	
	Level 11	1	85559	528704	8	1.2946		1.2946	
Average RF						1.1176		1.1176	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	--	--	--	8	--	8.8	--	8.8
	Level 2	--	--	--	8	--		--	
	Level 3	80	9433584	918349	8	1.0272		1.0272	
	Level 4	70	6864683	814490	8	0.9632		0.9632	
	Level 5	50	5340891	873556	8	0.9782		0.9782	
	Level 6	40	3812344	779465	8	0.9782		0.9782	
	Level 7	20	2469022	902314	8	1.0945		0.10945	
	Level 8	10	1165774	827529	8	1.1270		1.127	
	Level 9	5	565099	767882	8	1.1775		1.1775	
	Level 10	2	245066	829108	8	1.1823		1.1823	
	Level 11	1	120514	806384	8	1.1956		1.1956	
Average RF						1.0804		1.0804	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	--	--	--	8	--	7.2	--	7.2
	Level 2	--	--	--	8	--		--	
	Level 3	80	8793480	918349	8	0.9575		0.9575	
	Level 4	70	6849662	814490	8	0.9611		0.9611	
	Level 5	50	5412348	873556	8	0.9913		0.9913	
	Level 6	40	3995830	779465	8	1.0253		1.0253	
	Level 7	20	2434311	902314	8	1.0791		1.0791	
	Level 8	10	1154391	827529	8	1.1160		1.116	
	Level 9	5	551760	767882	8	1.1497		1.1497	
	Level 10	2	235672	829108	8	1.1370		1.137	
	Level 11	1	112209	806384	8	1.1132		1.1132	
Average RF						1.0589		1.0589	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	--	--	--	8	--	7.7	--	7.7
	Level 2	--	--	--	8	--		--	
	Level 3	80	10198616	918349	8	1.1105		1.1105	
	Level 4	70	7706242	814490	8	1.0813		1.0813	
	Level 5	50	6178860	873556	8	1.1317		1.1317	
	Level 6	40	4473736	779465	8	1.1479		1.1479	
	Level 7	20	2745066	902314	8	1.2169		1.2169	
	Level 8	10	1296013	827529	8	1.2529		1.2529	
	Level 9	5	620029	767882	8	1.2919		1.2919	
	Level 10	2	275557	829108	8	1.3294		1.3294	
	Level 11	1	132056	806384	8	1.3101		1.3101	
Average RF						1.2081		1.2081	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	--	--	--	8	--	11.4	--	11.4
	Level 2	--	--	--	8	--		--	
	Level 3	80	10744640	857490	8	1.2530		1.253	
	Level 4	70	8064097	740809	8	1.2441		1.2441	
	Level 5	50	6403487	862133	8	1.1884		1.1884	
	Level 6	40	4656229	706680	8	1.3178		1.3178	
	Level 7	20	2843028	853856	8	1.3319		1.3319	
	Level 8	10	1355610	717459	8	1.5116		1.5116	
	Level 9	5	651064	632539	8	1.6469		1.6469	
	Level 10	2	286782	878824	8	1.3053		1.3053	
	Level 11	1	143204	742912	8	1.5421		1.5421	
Average RF						1.3712		1.3712	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	--	--	--	8	--	5.5	--	5.5
	Level 2	--	--	--	8	--		--	
	Level 3	80	8309963	857490	8	0.9691		0.9691	
	Level 4	70	6680582	740809	8	1.0306		1.0306	
	Level 5	50	5700631	862133	8	1.0580		1.058	
	Level 6	40	3841613	706680	8	1.0872		1.0872	
	Level 7	20	2397303	853856	8	1.1230		1.123	
	Level 8	10	995644	717459	8	1.1102		1.1102	
	Level 9	5	450786	632539	8	1.1403		1.1403	
	Level 10	2	244810	878824	8	1.1143		1.1143	
	Level 11	1	107897	742912	8	1.1619		1.1619	
Average RF						1.0883		1.0883	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	--	--	--	8	--	3.8	--	3.8
	Level 2	--	--	--	8	--		--	
	Level 3	80	8822732	857490	8	1.0289		1.0289	
	Level 4	70	6685434	740809	8	1.0314		1.0314	
	Level 5	50	5772805	862133	8	1.0714		1.0714	
	Level 6	40	3723929	706680	8	1.0539		1.0539	
	Level 7	20	2280994	853856	8	1.0686		1.0686	
	Level 8	10	953999	717459	8	1.0638		1.0638	
	Level 9	5	435288	632539	8	1.1011		1.1011	
	Level 10	2	252643	878824	8	1.1499		1.1499	
	Level 11	1	104357	742912	8	1.1238		1.1238	
Average RF						1.0770		1.077	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	--	--	--	8	--	8.1	--	8.1
	Level 2	--	--	--	8	--		--	
	Level 3	80	12169324	1005109	8	1.2107		1.2108	
	Level 4	70	7624666	784322	8	1.1110		1.1110	
	Level 5	50	7263167	921807	8	1.2607		1.2607	
	Level 6	40	4134894	736223	8	1.1233		1.1233	
	Level 7	20	2656145	865863	8	1.2271		1.2271	
	Level 8	10	1033881	656084	8	1.2607		1.2607	
	Level 9	5	506160	601878	8	1.3455		1.3455	
	Level 10	2	287823	831085	8	1.3853		1.3853	
	Level 11	1	111038	639665	8	1.3887		1.3887	
Average RF						1.2570		1.257	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	--	--	--	8	--	18.3	--	18.3
	Level 2	--	--	--	8	--		--	
	Level 3	80	6883455	1005109	8	0.6848		0.6849	
	Level 4	70	7221710	784322	8	1.0523		1.0523	
	Level 5	50	5454667	921807	8	0.9468		0.9468	
	Level 6	40	4320354	736223	8	1.1737		1.1737	
	Level 7	20	2598987	865863	8	1.2006		1.2006	
	Level 8	10	1024299	656084	8	1.2490		1.249	
	Level 9	5	459283	601878	8	1.2209		1.2209	
	Level 10	2	251213	831085	8	1.2091		1.2091	
	Level 11	1	111038	639665	8	1.3887		1.3887	
Average RF						1.1251		1.1251	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	--	--	--	8	--	9.0	--	9
	Level 2	--	--	--	8	--		--	
	Level 3	80	9423625	1005109	8	0.9376		0.9376	
	Level 4	70	6497246	784322	8	0.9467		0.9467	
	Level 5	50	5484757	921807	8	0.9520		0.925	
	Level 6	40	3711184	736223	8	1.0082		1.0082	
	Level 7	20	2259610	865863	8	1.0439		1.0439	
	Level 8	10	842088	656084	8	1.0268		1.0268	
	Level 9	5	403264	601878	8	1.0720		1.072	
	Level 10	2	225189	831085	8	1.0838		1.0838	
	Level 11	1	98736	639665	8	1.2348		1.2348	
Average RF						1.0340		1.034	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	--	--	--	8	--	8.7	--	8.7
	Level 2	--	--	--	8	--		--	
	Level 3	80	11742384	1005109	8	1.1683		1.1683	
	Level 4	70	7759185	784322	8	1.1306		1.1306	
	Level 5	50	6348927	921807	8	1.1020		1.102	
	Level 6	40	4499780	736223	8	1.2224		1.2224	
	Level 7	20	2726933	865863	8	1.2598		1.2598	
	Level 8	10	943360	656084	8	1.1503		1.1503	
	Level 9	5	455715	601878	8	1.2114		1.2114	
	Level 10	2	263008	831085	8	1.2659		1.2659	
	Level 11	1	116444	639665	8	1.4563		1.4563	
Average RF						1.2185		1.2185	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	--	--	--	8	--	8.9	--	8.9
	Level 2	--	--	--	8	--		--	
	Level 3	80	9804166	1005109	8	0.9754		0.9754	
	Level 4	70	6364302	784322	8	0.9274		0.9274	
	Level 5	50	5141233	921807	8	0.8924		0.8924	
	Level 6	40	3673796	736223	8	0.9980		0.998	
	Level 7	20	2209259	865863	8	1.0206		1.0206	
	Level 8	10	746471	656084	8	0.9102		0.9102	
	Level 9	5	353359	601878	8	0.9394		0.9394	
	Level 10	2	208122	831085	8	1.0017		1.0017	
	Level 11	1	94727	639665	8	1.1847		1.1847	
Average RF						0.9833		0.9833	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	--	--	--	8	--	8.0	--	8
	Level 2	--	--	--	8	--		--	
	Level 3	80	10739851	1005109	8	1.0685		1.06853	
	Level 4	70	7001728	784322	8	1.0202		1.02024	
	Level 5	50	5739948	921807	8	0.9963		0.9963	
	Level 6	40	3990648	736223	8	1.0841		0.10841	
	Level 7	20	2416364	865863	8	1.1163		1.1163	
	Level 8	10	874821	656084	8	1.0667		1.0667	
	Level 9	5	404706	601878	8	1.0758		1.0758	
	Level 10	2	242520	831085	8	1.1672		1.1672	
	Level 11	1	103273	639665	8	1.2916		1.2916	
Average RF						1.0985		1.0985	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 7/2/2007

SDG: 500-5265, 500-5285

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Monochloronaphthalene	Level 1	0.5	53657	592514	8	1.4489	14.3	1.44893	14.313
	Level 2	1	65630	393971	8	1.3327		1.33269	
	Level 3	2	211801	666575	8	1.2710		1.27098	
	Level 4	4	317478	500930	8	1.2676		1.26759	
	Level 5	5	446195	499929	8	1.4280		1.42803	
	Level 6	10	907891	649817	8	1.1177		1.11772	
	Level 7	15	712692	377429	8	1.0071		1.00708	
	Level 8	20	1024234	411736	8	0.9950		0.99504	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						1.2335		1.23351	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dichloronaphthalene	Level 1	0.5	62117	592514	8	1.6774	11.2	1.67738	11.232
	Level 2	1	75596	393971	8	1.5351		1.53506	
	Level 3	2	215379	666575	8	1.2925		1.29245	
	Level 4	4	366301	500930	8	1.4625		1.46248	
	Level 5	5	413158	499929	8	1.3223		1.32229	
	Level 6	10	998871	649817	8	1.2297		1.22973	
	Level 7	15	950242	377429	8	1.3428		1.34276	
	Level 8	20	1287031	411736	8	1.2503		1.25035	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						1.3891		1.38906	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Trichloronaphthalene	Level 1	0.5	29847	858099	8	0.5565	12.1	0.555652	12.127
	Level 2	1	34148	670286	8	0.4076		0.40756	
	Level 3	2	127410	959447	8	0.5312		0.53118	
	Level 4	4	191674	776315	8	0.4938		0.4938	
	Level 5	5	216106	744879	8	0.4642		0.4642	
	Level 6	10	525994	998552	8	0.4214		0.42141	
	Level 7	15	995039	1318040	8	0.4026		0.40263	
	Level 8	20	1368452	1155624	8	0.4737		0.47367	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						0.4689		0.46887	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Tetrachloronaphthalene	Level 1	0.5	28598	858099	8	0.5332	17.7	0.53323	17.7
	Level 2	1	30137	670286	8	0.3597		0.35969	
	Level 3	2	123765	959447	8	0.5160		0.51598	
	Level 4	4	176291	776315	8	0.4542		0.45417	
	Level 5	5	186234	744879	8	0.4000		0.40003	
	Level 6	10	468194	998552	8	0.3751		0.3751	
	Level 7	15	398174	601181	8	0.3532		0.35324	
	Level 8	20	604135	686550	8	0.3520		0.35198	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						0.4179		0.41798	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pentachloronaphthalene	Level 1	0.5	22157	868697	8	0.4081	7.3	0.4081	7.336
	Level 2	1	24098	512072	8	0.3765		0.37648	
	Level 3	2	94140	970855	8	0.3879		0.38786	
	Level 4	4	142909	764568	8	0.3738		0.37383	
	Level 5	5	160619	714681	8	0.3596		0.35969	
	Level 6	10	390823	923028	8	0.3387		0.33873	
	Level 7	15	752374	1240136	8	0.3236		0.32357	
	Level 8	20	1067588	1129685	8	0.3780		0.37801	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						0.3683		0.36827	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Hexachloronaphthalene	Level 1	0.5	19620	868697	8	0.3614	10.2	0.36137	10.184
	Level 2	1	20655	512072	8	0.3227		0.32269	
	Level 3	2	78222	970855	8	0.3223		0.32228	
	Level 4	4	116543	764568	8	0.3049		0.30486	
	Level 5	5	133691	714681	8	0.2993		0.2993	
	Level 6	10	319707	923028	8	0.2771		0.27709	
	Level 7	15	681987	1240136	8	0.2933		0.29330	
	Level 8	20	734404	1129685	8	0.2600		0.26004	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						0.3051		0.30512	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Heptachloronaphthalene	Level 1	0.5	11740	868697	8	0.2162	5.3	0.21623	5.308
	Level 2	1	12566	512072	8	0.1963		0.19632	
	Level 3	2	48694	970855	8	0.2006		0.20062	
	Level 4	4	73757	764568	8	0.1929		0.19294	
	Level 5	5	84247	714681	8	0.1886		0.18861	
	Level 6	10	231574	923028	8	0.2007		0.20071	
	Level 7	15	419521	1240136	8	0.1804		0.18042	
	Level 8	20	563038	1129685	8	0.1994		0.19936	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						0.1969		0.1969	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Octachloronaphthalene	Level 1	0.5	11172	910111	8	0.1964	4.0	0.19641	3.955
	Level 2	1	11277	475157	8	0.1899		0.18987	
	Level 3	2	47491	976669	8	0.1945		0.1945	
	Level 4	4	72528	741832	8	0.1955		0.19554	
	Level 5	5	82369	683443	8	0.1928		0.19283	
	Level 6	10	203839	860084	8	0.1896		0.1896	
	Level 7	15	184908	554872	8	0.1777		0.17773	
	Level 8	20	267239	600749	8	0.1779		0.17794	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						0.1893		0.1893	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent

SDG: 500-5933, 500-5954

Calibration Date: 7/2/2007

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Monochloronaphthalene	Level 1	0.5	68567	649268	8	1.6897	13.9	1.68971	13.93698
	Level 2	1	144664	716905	8	1.6143		1.61432	
	Level 3	2	259063	683585	8	1.5159		1.51591	
	Level 4	4	525276	791947	8	1.3265		1.32654	
	Level 5	5	598933	729978	8	1.3128		1.31277	
	Level 6	10	1126681	768207	8	1.1733		1.17331	
	Level 7	15	1554055	651278	8	1.2726		1.27262	
	Level 8	20	2156492	717713	8	1.2019		1.26187	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						1.3884		1.38838	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dichloronaphthalene	Level 1	0.5	67095	649268	8	1.6534	12.3	1.65343	12.30809
	Level 2	1	141745	716905	8	1.5817		1.58174	
	Level 3	2	251751	683585	8	1.4731		1.47312	
	Level 4	4	556659	791947	8	1.4058		1.4058	
	Level 5	5	632552	729978	8	1.3865		1.38646	
	Level 6	10	1221265	768207	8	1.2718		1.27181	
	Level 7	15	1499381	651278	8	1.2278		0.22755	
	Level 8	20	2081102	717713	8	1.1599		1.15985	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						1.3950		1.39502	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Trichloronaphthalene	Level 1	0.5	33738	909397	8	0.5936	15.7	--	LR r ² =0.99595
	Level 2	1	73085	1039798	8	0.5623		--	
	Level 3	2	123038	960649	8	0.5123		--	
	Level 4	4	285587	1179969	8	0.4841		--	
	Level 5	5	304882	1063021	8	0.4589		--	
	Level 6	10	597606	1167162	8	0.4096		--	
	Level 7	15	979332	1279147	8	0.4083		--	
	Level 8	20	1255870	1285422	8	0.3908		--	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						0.4775		--	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Tetrachloronaphthalene	Level 1	0.5	33366	909397	8	0.5870	13.7	0.58704	13.65891
	Level 2	1	71626	1039798	8	0.5511		0.55108	
	Level 3	2	120580	960649	8	0.5021		0.50208	
	Level 4	4	275456	1179969	8	0.4669		0.46689	
	Level 5	5	311568	1063021	8	0.4690		0.46895	
	Level 6	10	612387	1167162	8	0.4197		0.41974	
	Level 7	15	731993	916917	8	0.4258		0.42577	
	Level 8	20	1028656	1022302	8	0.4025		0.46249	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						0.4780		0.478	

PAH - polyaromatic hydrocarbons
 PCN - polychlorinated naphthalene
 RF - response factor
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pentachloronaphthalene	Level 1	0.5	25470	845968	8	0.4817	10.6	0.48172	10.57519
	Level 2	1	54857	883672	8	0.4966		0.49663	
	Level 3	2	98472	858885	8	0.4586		0.45863	
	Level 4	4	230447	1116779	8	0.4127		0.4127	
	Level 5	5	259762	931649	8	0.4461		0.44622	
	Level 6	10	533838	1052734	8	0.4057		0.40568	
	Level 7	15	827563	1192021	8	0.3703		0.37027	
	Level 8	20	1056486	1096961	8	0.3852		0.38524	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						0.4321		0.43212	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Hexachloronaphthalene	Level 1	0.5	25476	845968	8	0.4818	14.6	0.48183	14.60687
	Level 2	1	54497	883672	8	0.4934		0.49337	
	Level 3	2	95423	858885	8	0.4444		0.4444	
	Level 4	4	218751	1116779	8	0.3918		0.39175	
	Level 5	5	248145	931649	8	0.4262		0.42616	
	Level 6	10	474732	1052234	8	0.3609		0.36075	
	Level 7	15	755851	1192021	8	0.3382		0.33818	
	Level 8	20	957055	1096961	8	0.3490		0.34896	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						0.4107		0.41068	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Heptachloronaphthalene	Level 1	0.5	18288	845968	8	0.3459	16.0	--	LR r ² =0.99346
	Level 2	1	36789	883672	8	0.3331		--	
	Level 3	2	66066	858885	8	0.3077		--	
	Level 4	4	155889	1116779	8	0.2792		--	
	Level 5	5	160905	931649	8	0.2763		--	
	Level 6	10	333446	1052234	8	0.2535		--	
	Level 7	15	509587	1192021	8	0.2280		--	
	Level 8	20	621654	1096961	8	0.2267		--	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						0.2813		--	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Octachloronaphthalene	Level 1	0.5	14312	901655	8	0.2540	10.3	0.25397	10.30138
	Level 2	1	28018	924314	8	0.2425		0.24256	
	Level 3	2	54577	923484	8	0.2364		0.2364	
	Level 4	4	130718	1149129	8	0.2275		0.22751	
	Level 5	5	123961	873222	8	0.2271		0.22713	
	Level 6	10	282182	1121417	8	0.2013		0.2073	
	Level 7	15	333350	921388	8	0.1930		0.19296	
	Level 8	20	435679	890310	8	0.1957		0.19574	
	Level 9	--	--	--	8	--		--	
	Level 10	--	--	--	8	--		--	
	Level 11	--	--	--	8	--		--	
Average RF						0.2222		0.22219	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Laboratory: Severn Trent
Calibration Date: 9/22/2008

SDG: 500-14347

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Naphthalene	Level 1	--	--	--	8	--		--	
	Level 2	--	--	--	8	--		--	
	Level 3	1	199340	1488590	8	1.0713		1.0710	
	Level 4	2	337610	1281083	8	1.0541		1.0540	
	Level 5	5	1011416	1653165	8	0.9789		0.9789	
	Level 6	10	1423917	1159313	8	0.9826	12.8	0.9826	12.8
	Level 7	20	3496223	1503935	8	0.9299		0.9299	
	Level 8	40	4637143	1073066	8	0.8643		0.8643	
	Level 9	50	5682973	1090703	8	0.8337		0.8337	
	Level 10	70	8069069	1187593	8	0.7765		0.7765	
	Level 11	80	10221876	1373659	8	0.7441		0.7441	
Average RF						0.9150		0.915	
Acenaphthylene	Level 1	--	--	--	8	--		--	
	Level 2	--	--	--	8	--		--	
	Level 3	1	210888	767263	8	2.1989		2.199	
	Level 4	2	361135	661412	8	2.1840		2.184	
	Level 5	5	1117256	874301	8	2.0446		2.045	
	Level 6	10	1531312	592407	8	2.0679	11.8	2.068	11.8
	Level 7	20	3701556	778470	8	1.9020		1.902	
	Level 8	40	5056692	571300	8	1.7702		1.77	
	Level 9	50	6071024	560279	8	1.7337		1.734	
	Level 10	70	9010339	620123	8	1.6606		1.661	
	Level 11	80	11558356	718531	8	1.6086		1.609	
Average RF						1.9078		1.9078	
Acenaphthene	Level 1	--	--	--	8	--		--	
	Level 2	--	--	--	8	--		--	
	Level 3	1	114434	767263	8	1.1932		1.193	
	Level 4	2	193167	661412	8	1.1682		1.168	
	Level 5	5	588354	874301	8	1.0767		1.077	
	Level 6	10	815034	592407	8	1.1006	11.8	1.101	11.8
	Level 7	20	1974973	778470	8	1.0148		1.015	
	Level 8	40	2715323	571300	8	0.9506		0.9506	
	Level 9	50	3231543	560279	8	0.9228		0.9228	
	Level 10	70	4780429	620123	8	0.8810		0.881	
	Level 11	80	6292708	718531	8	0.8758		0.8758	
Average RF						1.0204		1.0204	
Fluorene	Level 1	--	--	--	8	--		--	
	Level 2	--	--	--	8	--		--	
	Level 3	1	138261	767263	8	1.4416		1.442	
	Level 4	2	238124	661412	8	1.4401		1.44	
	Level 5	5	725210	874301	8	1.3272		1.327	
	Level 6	10	981336	592407	8	1.3252	18.4	1.325	18.4
	Level 7	20	2228115	778470	8	1.1449		1.145	
	Level 8	40	2954468	571300	8	1.0343		1.034	
	Level 9	50	3456179	560279	8	0.9870		0.987	
	Level 10	70	4979032	620123	8	0.9176		0.9176	
	Level 11	80	6638904	718531	8	0.9240		0.924	
Average RF						1.1713		0.9696	LR - r^2 = 0.9909

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Phenanthrene	Level 1	--	--	--	8	--	7.6	--	7.6
	Level 2	--	--	--	8	--		--	
	Level 3	1	208011	1359032	8	1.2245		1.224	
	Level 4	2	357292	1179084	8	1.2121		1.212	
	Level 5	5	1121008	1595645	8	1.1241		1.124	
	Level 6	10	1529973	1071630	8	1.1422		1.142	
	Level 7	20	3349474	1239679	8	1.0808		1.081	
	Level 8	40	4622514	882482	8	1.0476		1.048	
	Level 9	50	5702614	891632	8	1.0233		1.023	
	Level 10	70	8972553	978547	8	1.0479		1.048	
	Level 11	80	11288653	1145554	8	0.9854		0.9854	
Average RF						1.0986		1.0986	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Anthracene	Level 1	--	--	--	8	--	9.4	--	9.4
	Level 2	--	--	--	8	--		--	
	Level 3	1	211092	1359032	8	1.2426		1.243	
	Level 4	2	358220	1179084	8	1.2152		1.215	
	Level 5	5	1164098	1595645	8	1.1673		1.167	
	Level 6	10	1572122	1071630	8	1.1736		1.174	
	Level 7	20	3462008	1239679	8	1.1171		1.117	
	Level 8	40	4675878	882482	8	1.0597		1.06	
	Level 9	50	5839819	891632	8	1.0479		1.048	
	Level 10	70	8523768	978547	8	0.9955		0.9955	
	Level 11	80	10697415	1145554	8	0.9338		0.9338	
Average RF						1.1059		1.1059	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Fluoranthene	Level 1	--	--	--	8	--	10.5	--	10.5
	Level 2	--	--	--	8	--		--	
	Level 3	1	233806	1359032	8	1.3763		1.376	
	Level 4	2	400504	1179084	8	1.3587		1.359	
	Level 5	5	1320684	1595645	8	1.3243		1.324	
	Level 6	10	1740708	1071630	8	1.2995		1.299	
	Level 7	20	3798686	1239679	8	1.2257		1.226	
	Level 8	40	4615898	882482	8	1.0461		1.046	
	Level 9	50	6520440	891632	8	1.1701		1.17	
	Level 10	70	9562685	978547	8	1.1168		1.117	
	Level 11	80	12096189	1145554	8	1.0559		1.056	
Average RF						1.2193		1.2193	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Pyrene	Level 1	--	--	--	8	--	8.9	--	8.9
	Level 2	--	--	--	8	--		--	
	Level 3	1	252735	1439392	8	1.4047		1.405	
	Level 4	2	429049	1267427	8	1.3541		1.354	
	Level 5	5	1383527	1878853	8	1.1782		1.178	
	Level 6	10	1807462	1115160	8	1.2966		1.297	
	Level 7	20	3988642	1311028	8	1.2170		1.217	
	Level 8	40	4656692	756714	8	1.2308		1.231	
	Level 9	50	6704480	969590	8	1.1064		1.106	
	Level 10	70	9994604	1051424	8	1.0864		1.086	
	Level 11	80	12716395	1098533	8	1.1576		1.158	
Average RF						1.2257		1.2257	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) anthracene	Level 1	0.1	22145	1293156	8	1.3700	7.6	1.37	7.5
	Level 2	0.5	53824	746526	8	1.1536		1.154	
	Level 3	1	213456	1439392	8	1.1864		1.186	
	Level 4	2	373515	1267427	8	1.1788		1.179	
	Level 5	5	1287665	1878853	8	1.0966		1.0987	
	Level 6	10	1566513	1115160	8	1.1238		1.124	
	Level 7	20	3792921	1311028	8	1.1572		1.157	
	Level 8	40	4191593	756714	8	1.1078		1.108	
	Level 9	50	6669242	969590	8	1.1005		1.101	
	Level 10	70	9608220	1051424	8	1.0444		1.044	
	Level 11	80	11950171	1098533	8	1.0878		1.088	
Average RF						1.1204		1.1461	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Chrysene	Level 1	--	--	--	8	--	10.5	--	10
	Level 2	0.5	49333	746526	8	1.0573		1.057	
	Level 3	1	208034	1439392	8	1.1562		1.156	
	Level 4	2	356681	1267427	8	1.1257		1.126	
	Level 5	5	1209603	1878853	8	1.0301		1.03	
	Level 6	10	1472648	1115160	8	1.0565		1.056	
	Level 7	20	3262425	1311028	8	0.9954		0.9954	
	Level 8	40	3578966	756714	8	0.9459		0.9459	
	Level 9	50	5415058	969590	8	0.8936		0.8936	
	Level 10	70	7810840	1051424	8	0.8490		0.849	
	Level 11	80	10085045	1098533	8	0.9180		0.918	
Average RF						0.9967		1.0028	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (b) fluoranthene	Level 1	0.1	25165	1474160	8	1.3657	11.9	1.366	11.9
	Level 2	0.5	61837	824802	8	1.1996		1.2	
	Level 3	1	237616	1601275	8	1.1871		1.1870	
	Level 4	2	416835	1385027	8	1.2038		1.2040	
	Level 5	5	1386241	2114948	8	1.0487		1.049	
	Level 6	10	1815557	1259632	8	1.1531		1.153	
	Level 7	20	4171977	1529972	8	1.0907		1.091	
	Level 8	40	4421205	908400	8	0.9734		0.9734	
	Level 9	50	8014880	1215765	8	1.0548		1.055	
	Level 10	70	11897675	1507157	8	0.9022		0.9022	
	Level 11	--	--	--	8	--		--	
Average RF						1.1179		1.1179	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (k) fluoranthene	Level 1	0.1	23077	1474160	8	1.2523	15.9	1.252	15.9
	Level 2	0.5	57474	824802	8	1.1149		1.115	
	Level 3	1	233287	1601275	8	1.1655		1.1660	
	Level 4	2	396590	1385027	8	1.1454		1.1450	
	Level 5	5	1563218	2114948	8	1.1826		1.183	
	Level 6	10	1682396	1259632	8	1.0685		1.069	
	Level 7	20	3958959	1529972	8	1.0350		1.035	
	Level 8	40	4778834	908400	8	1.0521		1.052	
	Level 9	50	6375040	1215765	8	0.8390		0.839	
	Level 10	70	9217352	1507157	8	0.6989		0.6989	
	Level 11	--	--	--	8	--		--	
Average RF						1.0554		1.0554	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-1

PAH/PCN Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU1 and 5 LAP

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Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (a) pyrene	Level 1	0.1	21535	1474160	8	1.1687	12.6	1.169	12.6
	Level 2	0.5	53034	824802	8	1.0288		1.029	
	Level 3	1	208284	1601275	8	1.0406		1.0410	
	Level 4	2	358511	1385027	8	1.0354		1.035	
	Level 5	5	1297459	2114948	8	0.9816		0.9816	
	Level 6	10	1567807	1259632	8	0.9957		0.9957	
	Level 7	20	3718241	1529972	8	0.9721		0.9721	
	Level 8	40	4194820	908400	8	0.9236		0.9236	
	Level 9	50	6644862	1215765	8	0.8745		0.8745	
	Level 10	70	10606725	1507157	8	0.8043		0.8043	
	Level 11	80	14100369	1917432	8	0.7354		0.7354	
Average RF						0.9600		0.96	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Indeno (1,2,3-cd) pyrene	Level 1	0.1	25387	1474160	8	1.3777	10.6	1.378	10.6
	Level 2	0.5	62989	824802	8	1.2219		1.222	
	Level 3	1	236278	1601275	8	1.1804		1.1800	
	Level 4	2	402635	1385027	8	1.1628		1.163	
	Level 5	5	1496038	2114948	8	1.1318		1.132	
	Level 6	10	1762207	1259632	8	1.1192		1.119	
	Level 7	20	4249253	1529972	8	1.1109		1.111	
	Level 8	40	4837430	908400	8	1.0650		1.065	
	Level 9	50	7877803	1215765	8	1.0368		1.037	
	Level 10	70	12992670	1507157	8	0.9852		0.9852	
	Level 11	80	18095410	1917432	8	0.9437		0.9437	
Average RF						1.1214		1.1214	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Dibenzo (a,h) anthracene	Level 1	0.1	22788	1474160	8	1.2367	13.9	1.237	13.9
	Level 2	0.5	52142	824802	8	1.0115		1.011	
	Level 3	1	202052	1601275	8	1.0095		1.0090	
	Level 4	2	334300	1385027	8	0.9655		0.9655	
	Level 5	5	1233601	2114948	8	0.9332		0.9332	
	Level 6	10	1470548	1259632	8	0.9340		0.934	
	Level 7	20	3515687	1529972	8	0.9192		0.9191	
	Level 8	40	4021503	908400	8	0.8854		0.8854	
	Level 9	50	6418050	1215765	8	0.8446		0.8446	
	Level 10	70	10429621	1507157	8	0.7909		0.7909	
	Level 11	80	14385460	1917432	8	0.7502		0.7502	
Average RF						0.9346		0.9346	
Compound	Standard	Cs	As	Ais	Cis	Recalculated		Reported	
						RF	%RSD	RF	%RSD
Benzo (g,h,i) perylene	Level 1	--	--	--	8	--	5.7	--	5.7
	Level 2	--	--	--	8	--		--	
	Level 3	1	207350	1601275	8	1.0359		1.036	
	Level 4	2	338319	1385027	8	0.9771		0.9771	
	Level 5	5	1273922	2114948	8	0.9637		0.9637	
	Level 6	10	1518689	1259632	8	0.9645		0.9645	
	Level 7	20	3651823	1529972	8	0.9547		0.9547	
	Level 8	40	4176080	908400	8	0.9194		0.9194	
	Level 9	50	6910643	1215765	8	0.9095		0.9095	
	Level 10	70	11680264	1507157	8	0.8857		0.8857	
	Level 11	80	16469942	1917432	8	0.8590		0.859	
Average RF						0.9411		0.9411	

PAH - polyaromatic hydrocarbons
PCN - polychlorinated naphthalene
RF - response factor
%RSD - percent relative standard deviation
SDG - sample delivery group

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 7/9/2006SDG: 247532

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Naphthalene	40	5850016	1243747	8	0.941	0.941	0.878	7.157	7.16
Acenaphthylene	40	6415770	674880	8	1.901	1.901	1.897	0.240	0.24
Acenaphthene	40	3500076	674880	8	1.037	1.037	1.052	1.409	1.41
Fluorene	40	NA	NA	NA	NA	42.462	40.000	6.155	6.15
Phenanthrene	40	6674658	1041549	8	1.282	1.282	1.064	20.506	20.51
Anthracene	40	6040926	1041549	8	1.160	1.160	1.253	7.457	7.46
Fluoranthene	40	NA	NA	NA	NA	42.208	40.000	5.521	5.52
Pyrene	40	6549799	944481	8	1.387	1.387	1.390	0.220	0.22
Benzo (a) anthracene	40	NA	NA	NA	NA	45.771	40.000	14.427	14.43
Chrysene	40	NA	NA	NA	NA	41.488	40.000	3.720	3.72
Benzo (b) fluoranthene	40	NA	NA	NA	NA	46.893	40.000	17.233	17.23
Benzo (k) fluoranthene	40	NA	NA	NA	NA	42.881	40.000	7.203	7.20
Benzo (a) pyrene	40	5715140	713966	8	1.601	1.601	1.599	0.111	0.11
Indeno (1,2,3-cd) pyrene	40	6815685	713966	8	1.909	1.909	1.819	4.974	4.97
Dibenzo (a,h) anthracene	40	5557009	713966	8	1.557	1.557	1.414	10.055	10.05
Benzo (g,h,i) perylene	40	5683629	713966	8	1.592	1.592	1.507	5.677	5.68

IC - initial calibration
 PAH - polynuclear aromatic hydrocarbon
 PCN - polychlorinated naphthalene
 %D - percent difference
 RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 7/18/2006SDG: 247700

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Naphthalene	40	4792434	1018530	8	0.941	0.941	0.931	1.075	1.08
Acenaphthylene	40	5084463	532721	8	1.909	1.909	1.872	1.991	1.99
Acenaphthene	40	2706514	532721	8	1.016	1.016	1.010	0.645	0.65
Fluorene	40	3372110	532721	8	1.266	1.266	1.244	1.748	1.75
Phenanthrene	40	5165420	783861	8	1.318	1.318	1.181	11.572	11.57
Anthracene	40	4441713	783861	8	1.133	1.133	1.114	1.715	1.72
Fluoranthene	40	5095075	783861	8	1.300	1.300	1.233	5.421	5.42
Pyrene	40	5290372	736081	8	1.437	1.437	1.419	1.283	1.28
Benzo (a) anthracene	40	NA	NA	NA	NA	40.066	40.000	0.165	0.16
Chrysene	40	4383873	736081	8	1.191	1.191	1.252	4.844	4.84
Benzo (b) fluoranthene	40	5314207	524577	8	2.026	2.026	1.843	9.933	9.93
Benzo (k) fluoranthene	40	4635157	524577	8	1.767	1.767	1.866	5.317	5.32
Benzo (a) pyrene	40	4266291	524577	8	1.627	1.627	1.640	0.807	0.81
Indeno (1,2,3-cd) pyrene	40	5111775	524577	8	1.949	1.949	1.896	2.771	2.77
Dibenzo (a,h) anthracene	40	4063195	524577	8	1.549	1.549	1.514	2.300	2.30
Benzo (g,h,i) perylene	40	4326566	524577	8	1.650	1.650	1.586	4.009	4.01

IC - initial calibration
 PAH - polynuclear aromatic hydrocarbon
 PCN - polychlorinated naphthalene
 %D - percent difference
 RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 7/23/2006

SDG: 247748

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Naphthalene	40	7167877	1363592	8	1.051	1.051	1.045	0.608	0.61
Acenaphthylene	40	7814922	802027	8	1.949	1.949	1.924	1.299	1.30
Acenaphthene	40	4298382	802027	8	1.072	1.072	1.067	0.452	0.45
Fluorene	40	NA	NA	NA	NA	45.118	40.000	12.795	12.80
Phenanthrene	40	9215504	1458153	8	1.264	1.264	1.260	0.294	0.29
Anthracene	40	NA	NA	NA	NA	46.727	40.000	16.818	16.82
Fluoranthene	40	9895421	1458153	8	1.357	1.357	1.278	6.241	6.24
Pyrene	40	9966079	1408860	8	1.415	1.415	1.441	1.787	1.79
Benzo (a) anthracene	40	10406464	1408860	8	1.477	1.477	1.413	4.582	4.58
Chrysene	40	9136963	1408860	8	1.297	1.297	1.287	0.761	0.76
Benzo (b) fluoranthene	40	13747124	1147399	8	2.396	2.396	2.117	13.172	13.17
Benzo (k) fluoranthene	40	NA	NA	NA	NA	39.814	40.000	0.465	0.47
Benzo (a) pyrene	40	9826497	1147399	8	1.713	1.713	1.612	6.246	6.25
Indeno (1,2,3-cd) pyrene	40	11895060	1147399	8	2.073	2.073	1.942	6.778	6.78
Dibenzo (a,h) anthracene	40	9499071	1147399	8	1.656	1.656	1.593	3.925	3.93
Benzo (g,h,i) perylene	40	10095199	1147399	8	1.760	1.760	1.652	6.510	6.51

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 7/27/2006SDG: 247836

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Naphthalene	40	1946534	370822	8	1.050	1.050	1.039	1.044	1.04
Acenaphthylene	40	2100245	228759	8	1.836	1.836	1.846	0.506	0.51
Acenaphthene	40	1149500	228758	8	1.005	1.005	1.026	2.058	2.06
Fluorene	40	1436888	228758	8	1.256	1.256	1.285	2.268	2.27
Phenanthrene	40	2332590	395718	8	1.179	1.179	1.218	3.203	3.20
Anthracene	40	2295159	395718	8	1.160	1.160	1.145	1.270	1.27
Fluoranthene	40	2627337	395718	8	1.328	1.328	1.318	0.780	0.78
Pyrene	40	2729122	371262	8	1.470	1.470	1.432	2.672	2.67
Benzo (a) anthracene	40	2908975	371262	8	1.567	1.567	1.417	10.556	10.56
Chrysene	40	2496643	371262	8	1.345	1.345	1.318	2.073	2.07
Benzo (b) fluoranthene	40	3900127	387498	8	2.013	2.013	1.636	23.007	23.01
Benzo (k) fluoranthene	40	2099952	387498	8	1.084	1.084	1.506	28.011	28.01
Benzo (a) pyrene	40	2542233	387498	8	1.312	1.312	1.287	1.979	1.98
Indeno (1,2,3-cd) pyrene	40	2971370	387498	8	1.534	1.534	1.498	2.357	2.39
Dibenzo (a,h) anthracene	40	2418495	387498	8	1.248	1.248	1.249	0.082	0.08
Benzo (g,h,i) perylene	40	2487296	387498	8	1.284	1.284	1.163	10.423	10.42

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 5 of 44)

Laboratory: Severn Trent
Calibration Date: 7/26/2006SDG: 247811

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Naphthalene	40	1873860	352249	8	1.064	1.064	1.039	2.400	2.40
Acenaphthylene	40	2047895	216998	8	1.887	1.887	1.846	2.272	2.27
Acenaphthene	40	1121893	216998	8	1.034	1.034	1.026	0.770	0.77
Fluorene	40	1394369	216998	8	1.285	1.285	1.285	0.021	0.02
Phenanthrene	40	2245441	368233	8	1.220	1.220	1.218	0.136	0.14
Anthracene	40	2163819	368233	8	1.175	1.175	1.145	2.601	2.60
Fluoranthene	40	2431822	368233	8	1.321	1.321	1.318	0.243	0.24
Pyrene	40	2512378	345998	8	1.452	1.452	1.432	1.419	1.42
Benzo (a) anthracene	40	2473316	345998	8	1.430	1.430	1.417	0.862	0.86
Chrysene	40	2289061	345998	8	1.323	1.323	1.318	0.420	0.42
Benzo (b) fluoranthene	40	3095533	358240	8	1.728	1.728	1.636	5.605	5.60
Benzo (k) fluoranthene	40	2259724	358240	8	1.262	1.262	1.506	16.207	16.21
Benzo (a) pyrene	40	2292918	358240	8	1.280	1.280	1.287	0.510	0.51
Indeno (1,2,3-cd) pyrene	40	2751890	358240	8	1.536	1.536	1.498	2.539	2.54
Dibenzo (a,h) anthracene	40	2244843	358240	8	1.253	1.253	1.249	0.318	0.32
Benzo (g,h,i) perylene	40	2294555	358240	8	1.281	1.281	1.163	10.185	10.19

IC - initial calibration
 PAH - polynuclear aromatic hydrocarbon
 PCN - polychlorinated naphthalene
 %D - percent difference
 RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 6 of 44)

Laboratory: Severn Trent
Calibration Date: 7/28/2006SDG: 247884

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Naphthalene	40	2468661	466195	8	1.059	1.059	1.039	1.931	1.93
Acenaphthylene	40	2530760	282711	8	1.790	1.790	1.846	2.990	2.99
Acenaphthene	40	1400848	282711	8	0.991	0.991	1.026	3.421	3.42
Fluorene	40	1793457	282711	8	1.269	1.268	1.285	1.296	1.30
Phenanthrene	40	2758256	459851	8	1.200	1.200	1.218	1.502	1.50
Anthracene	40	2647008	459851	8	1.151	1.151	1.145	0.506	0.51
Fluoranthene	40	2892718	459851	8	1.258	1.258	1.318	4.516	4.52
Pyrene	40	2975503	385544	8	1.544	1.544	1.432	7.794	7.79
Benzo (a) anthracene	40	2732952	385544	8	1.418	1.418	1.417	0.018	0.02
Chrysene	40	2555723	385544	8	1.326	1.326	1.318	0.618	0.62
Benzo (b) fluoranthene	40	3300708	382069	8	1.728	1.728	1.636	5.581	5.58
Benzo (k) fluoranthene	40	2496206	382069	8	1.307	1.307	1.506	13.211	13.21
Benzo (a) pyrene	40	2480462	382069	8	1.298	1.298	1.287	0.915	0.91
Indeno (1,2,3-cd) pyrene	40	2983522	382069	8	1.562	1.562	1.498	4.236	4.24
Dibenzo (a,h) anthracene	40	2434420	382069	8	1.274	1.274	1.249	2.005	2.00
Benzo (g,h,i) perylene	40	2478185	382069	8	1.297	1.297	1.163	11.581	11.58

IC - initial calibration
 PAH - polynuclear aromatic hydrocarbon
 PCN - polychlorinated naphthalene
 %D - percent difference
 RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 8/2/2006SDG: 247954

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Naphthalene	40	1898646	353302	8	1.075	1.075	1.039	3.446	3.45
Acenaphthylene	40	2032046	212979	8	1.908	1.908	1.846	3.396	3.40
Acenaphthene	40	1094535	212979	8	1.028	1.028	1.026	0.168	0.17
Fluorene	40	1416952	212979	8	1.331	1.331	1.285	3.516	3.52
Phenanthrene	40	2105798	335510	8	1.255	1.255	1.218	3.068	3.07
Anthracene	40	1841445	335510	8	1.098	1.098	1.145	4.169	4.17
Fluoranthene	40	1941593	335510	8	1.157	1.157	1.318	12.159	12.16
Pyrene	40	1993646	278472	8	1.432	1.432	1.432	0.006	0.01
Benzo (a) anthracene	40	1939110	278472	8	1.393	1.393	1.417	1.748	1.75
Chrysene	40	1737999	278472	8	1.248	1.248	1.318	5.266	5.27
Benzo (b) fluoranthene	40	2152696	279585	8	1.540	1.540	1.636	5.900	5.90
Benzo (k) fluoranthene	40	2109023	279585	8	1.509	1.509	1.506	0.206	0.21
Benzo (a) pyrene	40	1793329	279585	8	1.283	1.283	1.287	0.297	0.30
Indeno (1,2,3-cd) pyrene	40	2135640	279585	8	1.528	1.528	1.498	1.964	1.96
Dibenzo (a,h) anthracene	40	1727166	279585	8	1.236	1.236	1.249	1.102	1.10
Benzo (g,h,i) perylene	40	1775210	279585	8	1.270	1.270	1.163	9.228	9.23

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 7/31/2006SDG: 247904

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Naphthalene	40	2775379	524418	8	1.058	1.058	1.039	1.873	1.87
Acenaphthylene	40	2918350	316806	8	1.842	1.842	1.846	0.172	0.17
Acenaphthene	40	1589601	316806	8	1.004	1.004	1.026	2.202	2.20
Fluorene	40	2062417	316806	8	1.302	1.302	1.285	1.291	1.30
Phenanthrene	40	3105859	501603	8	1.238	1.238	1.218	1.679	1.68
Anthracene	40	2937697	501603	8	1.171	1.171	1.145	2.259	2.26
Fluoranthene	40	3295220	501603	8	1.314	1.314	1.318	0.283	0.28
Pyrene	40	3385113	466073	8	1.453	1.453	1.432	1.444	1.44
Benzo (a) anthracene	40	3367545	466073	8	1.445	1.445	1.417	1.949	1.95
Chrysene	40	3066785	466073	8	1.316	1.316	1.318	0.123	0.12
Benzo (b) fluoranthene	40	3911880	477390	8	1.639	1.639	1.636	0.146	0.15
Benzo (k) fluoranthene	40	3204445	477390	8	1.342	1.342	1.506	10.833	10.83
Benzo (a) pyrene	40	3058675	477390	8	1.281	1.281	1.287	0.408	0.41
Indeno (1,2,3-cd) pyrene	40	3626498	477390	8	1.519	1.519	1.498	1.402	1.40
Dibenzo (a,h) anthracene	40	2915476	477390	8	1.221	1.221	1.249	2.231	2.23
Benzo (g,h,i) perylene	40	3048664	477390	8	1.277	1.277	1.163	9.859	9.86

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 8/7/2006

SDG: 248048

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Naphthalene	40	6763187	1415502	8	0.956	0.956	0.970	1.446	1.45
Acenaphthylene	40	7662151	801882	8	1.911	1.911	1.931	1.031	1.03
Acenaphthene	40	4414591	801882	8	1.101	1.101	1.141	3.542	3.54
Fluorene	40	5220645	801882	8	1.302	1.302	1.278	1.869	1.87
Phenanthrene	40	7271059	1226734	8	1.185	1.185	1.190	0.404	0.40
Anthracene	40	7316724	1226734	8	1.193	1.193	1.166	2.274	2.27
Fluoranthene	40	7620524	1226734	8	1.242	1.175	1.318	5.707	5.75
Pyrene	40	7751196	1121811	8	1.382	1.382	1.339	3.241	3.24
Benzo (a) anthracene	40	7628400	1121811	8	1.360	1.360	1.412	3.653	3.65
Chrysene	40	7075553	1121811	8	1.261	1.261	1.269	0.582	0.58
Benzo (b) fluoranthene	40	8603630	1107389	8	1.554	1.554	1.456	6.747	6.75
Benzo (k) fluoranthene	40	7800762	1107389	8	1.409	1.409	1.436	1.913	1.91
Benzo (a) pyrene	40	7317874	1107389	8	1.322	1.322	1.319	0.175	0.17
Indeno (1,2,3-cd) pyrene	40	8833011	1107389	8	1.595	1.595	1.510	5.638	5.64
Dibenzo (a,h) anthracene	40	7295617	1107389	8	1.318	1.318	1.262	4.443	4.44
Benzo (g,h,i) perylene	40	7358085	1107389	8	1.329	1.329	1.190	11.690	11.69

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 10 of 44)

Laboratory: Severn Trent
Calibration Date: 8/8/2006

SDG: 248065

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2444939	440466	8	1.110	1.110	1.141	2.745	2.74
Pyrene	40	3485696	461213	8	1.512	1.512	1.339	12.926	12.93
Naphthalene	40	3877142	787142	8	0.985	0.985	0.970	1.599	1.60
Acenaphthylene	40	4292510	440466	8	1.949	1.949	1.931	0.939	0.94
Fluorene	40	2756390	440466	8	1.252	1.252	1.278	2.083	2.08
Phenanthrene	40	3506897	570370	8	1.230	1.230	1.190	3.315	3.31
Anthracene	40	3487619	570370	8	1.223	1.223	1.166	4.850	4.85
Fluoranthene	40	3327951	570370	8	1.167	1.167	1.175	0.669	0.67
Benzo (a) anthracene	40	3330599	461213	8	1.444	1.444	1.412	2.316	2.32
Chrysene	40	3099591	461213	8	1.344	1.344	1.269	5.932	5.93
Benzo (b) fluoranthene	40	3533898	456976	8	1.547	1.547	1.456	6.251	6.25
Benzo (k) fluoranthene	40	3472409	456976	8	1.520	1.520	1.436	5.806	5.81
Benzo (a) pyrene	40	3062474	456976	8	1.340	1.340	1.319	1.590	1.59
Indeno (1,2,3-cd) pyrene	40	3554835	456976	8	1.556	1.556	1.510	3.023	3.02
Dibenzo (a,h) anthracene	40	2966267	456796	8	1.299	1.298	1.262	2.944	2.90
Benzo (g,h,i) perylene	40	2937855	456796	8	1.286	1.286	1.190	8.108	8.07

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 11 of 44)

Laboratory: Severn Trent
Calibration Date: 8/14/2007SDG: 248160

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2541002	432523	8	1.175	1.175	1.125	4.407	4.41
Pyrene	40	5425408	716061	8	1.515	1.517	1.429	6.051	6.17
Naphthalene	40	4401019	789653	8	1.115	1.115	1.048	6.382	6.38
Acenaphthylene	40	4715695	432523	8	2.181	2.181	2.042	6.788	6.79
Fluorene	40	3201127	432523	8	1.480	1.480	1.367	8.287	8.29
Phenanthrene	40	4430430	716061	8	1.237	1.237	1.173	5.490	5.49
Anthracene	40	4360222	716061	8	1.218	1.218	1.153	5.666	5.67
Fluoranthene	40	5244855	715263	8	1.467	1.465	1.335	9.878	9.76
Benzo (a) anthracene	40	5169481	715263	8	1.445	1.445	1.442	0.220	0.22
Chrysene	40	4907593	715263	8	1.372	1.372	1.307	4.999	5.00
Benzo (b) fluoranthene	40	4991763	651988	8	1.531	1.531	1.473	3.989	3.99
Benzo (k) fluoranthene	40	5939443	651988	8	1.822	1.822	1.489	22.369	22.37
Benzo (a) pyrene	40	4584439	651988	8	1.406	1.406	1.334	5.446	5.45
Indeno (1,2,3-cd) pyrene	40	5198287	651988	8	1.595	1.595	1.612	1.074	1.07
Dibenzo (a,h) anthracene	40	NA	NA	NA	NA	43.837	40.000	9.593	9.59
Benzo (g,h,l) perylene	40	4245662	651988	8	1.302	1.302	1.267	2.802	2.80

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 8/16/2006SDG: 248182

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2425805	408959	8	1.186	1.186	1.125	5.417	5.42
Pyrene	40	5497957	692948	8	1.587	1.587	1.429	11.053	11.05
Naphthalene	40	3999512	719671	8	1.111	1.111	1.048	6.078	6.08
Acenaphthylene	40	4476530	408959	8	2.189	2.189	2.042	7.213	7.21
Fluorene	40	3057601	408959	8	1.495	1.495	1.367	9.392	9.39
Phenanthrene	40	4659820	722660	8	1.290	1.290	1.173	9.939	9.94
Anthracene	40	4256199	722660	8	1.178	1.178	1.153	2.203	2.20
Fluoranthene	40	5266109	722660	8	1.457	1.457	1.335	9.194	9.19
Benzo (a) anthracene	40	5117631	692948	8	1.477	1.477	1.442	2.409	2.41
Chrysene	40	4525456	692948	8	1.306	1.306	1.307	0.058	0.06
Benzo (b) fluoranthene	40	5356157	651103	8	1.645	1.645	1.473	11.731	11.73
Benzo (k) fluoranthene	40	5126153	651103	8	1.575	1.575	1.489	5.756	5.76
Benzo (a) pyrene	40	4496560	651103	8	1.381	1.381	1.334	3.565	3.56
Indeno (1,2,3-cd) pyrene	40	5372837	651103	8	1.650	1.650	1.612	2.387	2.39
Dibenzo (a,h) anthracene	40	NA	NA	NA	NA	44.787	40.000	11.969	11.97
Benzo (g,h,i) perylene	40	4415357	651103	8	1.356	1.366	1.267	7.056	7.06

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 8/16/2006SDG: 248190

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2277460	359247	8	1.268	1.268	1.125	12.666	12.67
Pyrene	40	4846115	590220	8	1.642	1.642	1.429	14.924	14.92
Naphthalene	40	3902374	670686	8	1.164	1.164	1.048	11.061	11.06
Acenaphthylene	40	4235615	359247	8	2.358	2.358	2.042	15.480	15.48
Fluorene	40	2839719	359247	8	1.581	1.581	1.367	15.655	15.66
Phenanthrene	40	4599515	624477	8	1.473	1.473	1.173	25.578	25.58
Anthracene	40	3645912	624477	8	1.168	1.168	1.153	1.314	1.31
Fluoranthene	40	4643064	624477	8	1.487	1.487	1.335	11.412	11.41
Benzo (a) anthracene	40	4930460	590220	8	1.671	1.671	1.442	15.836	15.84
Chrysene	40	4359322	590220	8	1.477	1.477	1.307	13.029	13.03
Benzo (b) fluoranthene	40	4855311	571889	8	1.698	1.698	1.473	15.313	15.31
Benzo (k) fluoranthene	40	5215016	571889	8	1.824	1.824	1.489	22.492	22.49
Benzo (a) pyrene	40	4342678	571889	8	1.519	1.519	1.334	13.875	13.87
Indeno (1,2,3-cd) pyrene	40	5168473	571889	8	1.808	1.808	1.612	12.135	12.14
Dibenzo (a,h) anthracene	40	NA	NA	NA	NA	40.066	40.000	0.165	0.16
Benzo (g,h,i) perylene	40	4171198	571889	8	1.459	1.459	1.267	15.145	15.14

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 8/17/2006SDG: 248208

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2174302	347807	8	1.250	1.250	1.125	11.101	11.11
Pyrene	40	4754101	584797	8	1.626	1.626	1.429	13.787	13.79
Naphthalene	40	3671676	621430	8	1.182	1.182	1.048	12.778	12.78
Acenaphthylene	40	4054687	347807	8	2.332	2.332	2.042	14.184	14.18
Fluorene	40	2704635	347807	8	1.555	1.555	1.367	13.777	13.78
Phenanthrene	40	4147162	587968	8	1.411	1.411	1.173	20.258	20.26
Anthracene	40	3731887	587968	8	1.269	1.269	1.153	10.142	10.14
Fluoranthene	40	4624828	587968	8	1.573	1.573	1.335	17.865	17.86
Benzo (a) anthracene	40	4936861	584797	8	1.688	1.688	1.442	17.062	17.06
Chrysene	40	4171323	584797	8	1.427	1.427	1.307	9.157	9.16
Benzo (b) fluoranthene	40	4954460	578137	8	1.714	1.714	1.473	16.396	16.40
Benzo (k) fluoranthene	40	4967189	578137	8	1.718	1.718	1.489	15.410	15.41
Benzo (a) pyrene	40	4266801	578137	8	1.476	1.476	1.334	10.676	10.68
Indeno (1,2,3-cd) pyrene	40	5205172	578137	8	1.801	1.801	1.612	11.711	11.73
Dibenzo (a,h) anthracene	40	NA	NA	NA	NA	49.785	40.000	24.462	24.46
Benzo (g,h,i) perylene	40	4322161	578137	8	1.495	1.495	1.267	18.022	18.02

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 8/22/2006SDG: 248233

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2080020	321205	8	1.295	1.295	1.125	15.085	15.10
Pyrene	40	4517799	535099	8	1.689	1.689	1.429	18.175	18.17
Naphthalene	40	3683974	607134	8	1.214	1.214	1.048	15.820	15.82
Acenaphthylene	40	3841257	321205	8	2.392	2.392	2.042	17.132	17.13
Fluorene	40	2611304	321205	8	1.626	1.626	1.367	18.948	18.95
Phenanthrene	40	3605335	553194	8	1.303	1.303	1.173	11.118	11.12
Anthracene	40	3541403	553194	8	1.280	1.280	1.153	11.090	11.09
Fluoranthene	40	4290208	553194	8	1.551	1.551	1.335	16.210	16.21
Benzo (a) anthracene	40	4518452	535099	8	1.689	1.689	1.442	17.092	17.09
Chrysene	40	3997628	535099	8	1.494	1.494	1.307	14.328	14.33
Benzo (b) fluoranthene	40	4167316	464105	8	1.796	1.796	1.473	21.958	21.96
Benzo (k) fluoranthene	40	4115804	464105	8	1.774	1.774	1.489	19.125	19.13
Benzo (a) pyrene	40	3471880	464105	8	1.496	1.496	1.334	12.184	12.18
Indeno (1,2,3-cd) pyrene	40	4117480	464105	8	1.774	1.774	1.612	10.080	10.08
Dibenzo (a,h) anthracene	40	NA	NA	NA	NA	48.105	40.000	20.262	20.26
Benzo (g,h,i) perylene	40	3382903	464105	8	1.458	1.458	1.267	15.072	15.07

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 8/21/2006SDG: 248248

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2106302	333298	8	1.264	1.264	1.125	12.311	12.31
Pyrene	40	5002620	624372	8	1.602	1.602	1.429	12.146	12.15
Naphthalene	40	3548830	592026	8	1.199	1.199	1.048	14.418	14.42
Acenaphthylene	40	3946769	333298	8	2.368	2.368	2.042	15.983	15.98
Fluorene	40	2679249	333298	8	1.608	1.608	1.367	17.615	17.62
Phenanthrene	40	3937727	597790	8	1.317	1.317	1.173	12.309	12.91
Anthracene	40	3805292	597790	8	1.273	1.273	1.153	10.463	10.46
Fluoranthene	40	4733088	597790	8	1.584	1.584	1.335	18.642	18.64
Benzo (a) anthracene	40	5118110	624372	8	1.639	1.639	1.442	13.668	13.67
Chrysene	40	4370298	624372	8	1.400	1.400	1.307	7.115	7.12
Benzo (b) fluoranthene	40	5687051	549717	8	2.069	2.069	1.473	40.514	40.51
Benzo (k) fluoranthene	40	4009482	549717	8	1.459	1.459	1.489	2.025	2.03
Benzo (a) pyrene	40	4012935	549717	8	1.460	1.460	1.334	9.472	9.47
Indeno (1,2,3-cd) pyrene	40	4675986	549717	8	1.701	1.701	1.612	5.542	5.54
Dibenzo (a,h) anthracene	40	NA	NA	NA	NA	46.033	40.000	15.083	15.08
Benzo (g,h,i) perylene	40	3845575	549717	8	1.399	1.399	1.267	10.438	10.44

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 8/22/2007SDG: 248271

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2080209	321205	8	1.295	1.295	1.125	15.096	15.10
Pyrene	40	4517799	535099	8	1.689	1.689	1.429	18.175	18.17
Naphthalene	40	3683974	607134	8	1.214	1.214	1.048	15.820	15.82
Acenaphthylene	40	3841257	321205	8	2.392	2.392	2.042	17.132	17.13
Fluorene	40	2611304	321205	8	1.626	1.626	1.367	18.948	18.95
Phenanthrene	40	3605335	553194	8	1.303	1.303	1.173	11.118	11.12
Anthracene	40	3541403	553194	8	1.280	1.280	1.153	11.090	11.09
Fluoranthene	40	4290208	553194	8	1.551	1.551	1.335	16.210	16.21
Benzo (a) anthracene	40	4518452	535099	8	1.689	1.689	1.442	17.092	17.09
Chrysene	40	3997628	535099	8	1.494	1.494	1.307	14.328	14.33
Benzo (b) fluoranthene	40	4167316	464105	8	1.796	1.796	1.473	21.958	21.96
Benzo (k) fluoranthene	40	4115804	464105	8	1.774	1.774	1.489	19.125	19.13
Benzo (a) pyrene	40	3471880	464105	8	1.496	1.496	1.334	12.184	12.18
Indeno (1,2,3-cd) pyrene	40	4117480	464105	8	1.774	1.774	1.612	10.080	10.08
Dibenzo (a,h) anthracene	40	NA	NA	NA	NA	48.105	40.000	20.262	20.26
Benzo (g,h,i) perylene	40	3382903	464105	8	1.458	1.458	1.267	15.072	15.07

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 8/23/2006SDG: 248289

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2350914	383860	8	1.225	1.225	1.125	8.843	8.84
Pyrene	40	4667895	581129	8	1.606	1.606	1.429	12.429	12.43
Naphthalene	40	4090762	710581	8	1.151	1.151	1.048	9.886	9.87
Acenaphthylene	40	4347483	383860	8	2.265	2.651	2.042	10.930	10.93
Fluorene	40	2871723	383860	8	1.496	1.496	1.367	9.459	9.46
Phenanthrene	40	4102174	624023	8	1.315	1.315	1.173	12.081	12.08
Anthracene	40	3923874	624023	8	1.258	1.258	1.153	9.117	9.12
Fluoranthene	40	4453930	624023	8	1.427	1.427	1.335	6.951	6.95
Benzo (a) anthracene	40	4541154	581129	8	1.563	1.563	1.442	8.359	8.36
Chrysene	40	4180949	581129	8	1.439	1.439	1.307	10.100	10.10
Benzo (b) fluoranthene	40	4695199	560243	8	1.676	1.676	1.473	13.828	13.83
Benzo (k) fluoranthene	40	4669355	560243	8	1.667	1.667	1.489	11.955	11.96
Benzo (a) pyrene	40	3924287	560243	8	1.401	1.401	1.334	5.043	5.04
Indeno (1,2,3-cd) pyrene	40	4894803	560243	8	1.747	1.747	1.612	8.405	8.41
Dibenzo (a,h) anthracene	40	NA	NA	NA	NA	47.025	40.000	17.563	17.56
Benzo (g,h,i) perylene	40	4114044	560243	8	1.469	1.469	1.267	15.928	15.93

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 8/25/2006SDG: 248301

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1697845	297385	8	1.142	1.142	1.128	1.234	1.23
Pyrene	40	3191575	414502	8	1.540	1.540	1.321	16.572	16.57
Naphthalene	40	2776459	553690	8	1.003	1.003	0.935	7.246	7.25
Acenaphthylene	40	2836794	297385	8	1.908	1.908	1.845	3.428	3.44
Fluorene	40	1902261	297385	8	1.279	1.279	1.281	0.163	0.16
Phenanthrene	40	2898114	448931	8	1.291	1.291	1.236	4.435	4.43
Anthracene	40	2887325	448931	8	1.286	1.286	1.171	9.892	9.89
Fluoranthene	40	3144731	448931	8	1.401	1.401	1.288	8.738	8.70
Benzo (a) anthracene	40	2898960	414502	8	1.399	1.399	1.425	1.829	1.83
Chrysene	40	2679854	414502	8	1.293	1.293	1.173	10.255	10.25
Benzo (b) fluoranthene	40	2833020	375217	8	1.510	1.510	1.479	2.095	2.10
Benzo (k) fluoranthene	40	2807799	375217	8	1.497	1.497	1.540	2.835	2.83
Benzo (a) pyrene	40	2507660	375217	8	1.337	1.337	1.351	1.039	1.04
Indeno (1,2,3-cd) pyrene	40	2885915	375217	8	1.538	1.538	1.499	2.593	2.59
Dibenzo (a,h) anthracene	40	2375305	375217	8	1.266	1.266	1.265	0.117	0.12
Benzo (g,h,l) perylene	40	2460355	375217	8	1.311	1.311	1.233	6.360	6.36

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 8/25/2006SDG: 248327

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1697845	297385	8	1.142	1.142	1.128	1.234	1.23
Pyrene	40	3191575	414502	8	1.540	1.540	1.321	16.572	16.57
Naphthalene	40	2776459	553690	8	1.003	1.003	0.935	7.246	7.25
Acenaphthylene	40	2836794	297385	8	1.908	1.908	1.845	3.428	3.44
Fluorene	40	1902261	297385	8	1.279	1.279	1.281	0.163	0.16
Phenanthrene	40	2898114	448931	8	1.291	1.291	1.236	4.435	4.43
Anthracene	40	2887325	448931	8	1.286	1.286	1.171	9.892	9.89
Fluoranthene	40	3144731	448931	8	1.401	1.401	1.288	8.738	8.70
Benzo (a) anthracene	40	2898960	414502	8	1.399	1.399	1.425	1.829	1.83
Chrysene	40	2679854	414502	8	1.293	1.293	1.173	10.255	10.25
Benzo (b) fluoranthene	40	2833020	375217	8	1.510	1.510	1.479	2.095	2.10
Benzo (k) fluoranthene	40	2807799	375217	8	1.497	1.497	1.540	2.835	2.83
Benzo (a) pyrene	40	2507660	375217	8	1.337	1.337	1.351	1.039	1.04
Indeno (1,2,3-cd) pyrene	40	2885915	375217	8	1.538	1.538	1.499	2.593	2.59
Dibenzo (a,h) anthracene	40	2375305	375217	8	1.266	1.266	1.265	0.117	0.12
Benzo (g,h,i) perylene	40	2460355	375217	8	1.311	1.311	1.233	6.360	6.36

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 21 of 44)

Laboratory: Severn Trent
Calibration Date: 9/1/2006SDG: 248423

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1589798	271186	8	1.172	1.172	1.060	10.595	10.60
Pyrene	40	3638318	498571	8	1.459	1.460	1.389	5.082	5.08
Naphthalene	40	2606880	459548	8	1.135	1.135	1.033	9.816	9.82
Acenaphthylene	40	2831331	271186	8	2.088	2.088	1.857	12.420	12.42
Fluorene	40	NA	NA	NA	NA	50.948	40.000	27.370	27.37
Phenanthrene	40	3189382	484086	8	1.318	1.318	1.141	15.500	15.50
Anthracene	40	2928424	484086	8	1.210	1.210	1.142	5.957	5.96
Fluoranthene	40	3474908	484086	8	1.436	1.436	1.358	5.687	5.69
Benzo (a) anthracene	40	3816075	498571	8	1.531	1.531	1.440	6.327	6.33
Chrysene	40	3186715	498571	8	1.278	1.278	1.332	4.026	4.03
Benzo (b) fluoranthene	40	4231083	494442	8	1.711	1.711	1.448	18.232	18.23
Benzo (k) fluoranthene	40	3318093	494442	8	1.342	1.342	1.439	6.702	6.70
Benzo (a) pyrene	40	3399321	494442	8	1.375	1.375	1.292	6.425	6.43
Indeno (1,2,3-cd) pyrene	40	4151418	494442	8	1.679	1.679	1.523	10.263	10.26
Dibenzo (a,h) anthracene	40	3443166	494442	8	1.393	1.393	1.239	12.386	12.39
Benzo (g,h,l) perylene	40	3428831	494442	8	1.387	1.387	1.217	14.004	14.00

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 9/1/2006SDG: 248439

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1589798	271186	8	1.172	1.172	1.060	10.595	10.60
Pyrene	40	3638318	498571	8	1.459	1.460	1.389	5.082	5.08
Naphthalene	40	2606880	459548	8	1.135	1.135	1.033	9.816	9.82
Acenaphthylene	40	2831331	271186	8	2.088	2.088	1.857	12.420	12.42
Fluorene	40	NA	NA	NA	NA	50.948	40.000	27.370	27.37
Phenanthrene	40	3189382	484086	8	1.318	1.318	1.141	15.500	15.50
Anthracene	40	2928424	484086	8	1.210	1.210	1.142	5.957	5.96
Fluoranthene	40	3474908	484086	8	1.436	1.436	1.358	5.687	5.69
Benzo (a) anthracene	40	3816075	498571	8	1.531	1.531	1.440	6.327	6.33
Chrysene	40	3186715	498571	8	1.278	1.278	1.332	4.026	4.03
Benzo (b) fluoranthene	40	4231083	494442	8	1.711	1.711	1.448	18.232	18.23
Benzo (k) fluoranthene	40	3318093	494442	8	1.342	1.342	1.439	6.702	6.70
Benzo (a) pyrene	40	3399321	494442	8	1.375	1.375	1.292	6.425	6.43
Indeno (1,2,3-cd) pyrene	40	4151418	494442	8	1.679	1.679	1.523	10.263	10.26
Dibenzo (a,h) anthracene	40	3443166	494442	8	1.393	1.393	1.239	12.386	12.39
Benzo (g,h,l) perylene	40	3428831	494442	8	1.387	1.387	1.217	14.004	14.00

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 9/8/2006SDG: 248537

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2543690	447281	8	1.137	1.137	1.081	5.255	5.25
Pyrene	40	5086334	642125	8	1.584	1.584	1.495	5.937	5.94
Naphthalene	40	4167915	842304	8	0.990	0.990	0.996	0.623	0.62
Acenaphthylene	40	4440301	447281	8	1.985	1.985	1.863	6.557	6.56
Fluorene	40	2990972	447281	8	1.337	1.337	1.265	5.765	5.77
Phenanthrene	40	4735608	711423	8	1.331	1.331	1.209	10.105	10.11
Anthracene	40	4575110	711423	8	1.286	1.286	1.204	6.846	6.85
Fluoranthene	40	4878784	711423	8	1.372	1.372	1.278	7.285	7.29
Benzo (a) anthracene	40	4859384	642125	8	1.514	1.514	1.340	12.919	12.92
Chrysene	40	NA	NA	NA	NA	47.010	40.000	17.525	17.53
Benzo (b) fluoranthene	40	4881401	601998	8	1.622	1.622	1.445	12.229	12.23
Benzo (k) fluoranthene	40	NA	NA	NA	NA	55.295	40.000	38.238	38.24
Benzo (a) pyrene	40	4025160	601998	8	1.337	1.334	1.230	8.764	8.49
Indeno (1,2,3-cd) pyrene	40	4317422	601998	8	1.434	1.434	1.490	3.739	3.74
Dibenzo (a,h) anthracene	40	3422798	601998	8	1.137	1.137	1.211	6.083	6.08
Benzo (g,h,l) perylene	40	3611516	601998	8	1.200	1.200	1.244	3.587	3.59

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 10/3/2006

SDG: 248926

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2752837	592661	8	0.929	0.929	1.089	14.723	14.72
Pyrene	40	5218764	861217	8	1.212	1.212	1.410	14.069	14.07
Naphthalene	40	4723621	1102692	8	0.857	0.857	0.998	14.116	14.12
Acenaphthylene	40	4858659	592661	8	1.640	1.640	1.846	11.189	11.19
Fluorene	40	3417340	592661	8	1.153	1.153	1.306	11.686	11.69
Phenanthrene	40	4708288	884882	8	1.064	1.064	1.228	13.366	13.37
Anthracene	40	4704224	884882	8	1.063	1.063	1.171	9.229	9.23
Fluoranthene	40	5086924	884882	8	1.150	1.150	1.332	13.685	13.69
Benzo (a) anthracene	40	5010960	861217	8	1.164	1.164	1.435	18.908	18.91
Chrysene	40	4680200	861217	8	1.087	1.087	1.338	18.779	18.78
Benzo (b) fluoranthene	40	5482698	798754	8	1.373	1.373	1.473	6.810	6.81
Benzo (k) fluoranthene	40	4446749	798754	8	1.113	1.113	1.485	24.998	25.00
Benzo (a) pyrene	40	4502122	798754	8	1.127	1.127	1.327	15.035	15.04
Indeno (1,2,3-cd) pyrene	40	5116403	798754	8	1.281	1.281	1.484	13.697	13.70
Dibenzo (a,h) anthracene	40	4282747	798754	8	1.072	1.072	1.201	10.728	10.73
Benzo (g,h,i) perylene	40	4356030	798754	8	1.091	1.091	1.244	12.329	13.66

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 10/4/2006SDG: 248981

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1955664	402190	8	0.973	0.973	1.049	7.269	7.27
Pyrene	40	3077484	436840	8	1.409	1.409	1.406	0.180	0.18
Naphthalene	40	3632731	810101	8	0.897	0.897	1.052	14.722	14.72
Acenaphthylene	40	3661815	402190	8	1.821	1.821	1.888	3.569	3.57
Fluorene	40	2307247	402190	8	1.147	1.147	1.322	13.222	13.22
Phenanthrene	40	2965691	577388	8	1.027	1.027	1.219	15.743	15.74
Anthracene	40	3065315	577388	8	1.062	1.062	1.217	12.782	12.78
Fluoranthene	40	3009693	577388	8	1.043	1.043	1.291	19.230	19.23
Benzo (a) anthracene	40	2590757	436840	8	1.186	1.186	1.429	17.004	17.00
Chrysene	40	2497452	436840	8	1.143	1.143	1.307	12.519	12.52
Benzo (b) fluoranthene	40	2805788	435873	8	1.287	1.287	1.497	13.988	13.99
Benzo (k) fluoranthene	40	2644199	435873	8	1.213	1.213	1.507	19.480	19.48
Benzo (a) pyrene	40	2287757	435873	8	1.050	1.050	1.342	21.753	21.78
Indeno (1,2,3-cd) pyrene	40	2630320	435873	8	1.207	1.207	1.599	24.522	24.52
Dibenzo (a,h) anthracene	40	2116827	435873	8	0.971	0.971	1.322	26.548	26.55
Benzo (g,h,i) perylene	40	2221871	435873	8	1.020	1.020	1.242	17.945	17.94

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 10/6/2006SDG: 249025

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1697274	352539	8	0.963	0.963	1.049	8.186	8.19
Pyrene	40	3012954	418812	8	1.439	1.439	1.406	2.301	2.30
Naphthalene	40	3253920	733808	8	0.887	0.887	1.052	15.673	15.67
Acenaphthylene	40	3202053	352539	8	1.817	1.817	1.888	3.800	3.80
Fluorene	40	1981909	352539	8	1.124	1.124	1.322	14.960	14.96
Phenanthrene	40	2711779	529054	8	1.025	1.025	1.219	15.918	15.92
Anthracene	40	2709750	529054	8	1.024	1.024	1.217	15.855	15.85
Fluoranthene	40	2891804	529054	8	1.093	1.093	1.291	15.304	15.30
Benzo (a) anthracene	40	2432466	418812	8	1.162	1.162	1.429	18.720	18.72
Chrysene	40	2423419	418812	8	1.157	1.157	1.307	11.458	11.46
Benzo (b) fluoranthene	40	2894201	428594	8	1.351	1.351	1.497	9.771	9.77
Benzo (k) fluoranthene	40	2470956	428594	8	1.153	1.153	1.507	23.478	23.48
Benzo (a) pyrene	40	2275024	428594	8	1.062	1.062	1.342	20.867	20.87
Indeno (1,2,3-cd) pyrene	40	2733985	428594	8	1.276	1.276	1.599	20.215	20.21
Dibenzo (a,h) anthracene	40	2182216	428594	8	1.018	1.018	1.322	22.993	22.99
Benzo (g,h,i) perylene	40	2351214	428594	8	1.097	1.097	1.242	11.693	11.69

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 10/10/2006SDG: 249072

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1880266	387827	8	0.970	0.970	1.049	7.542	7.54
Pyrene	40	3239440	466225	8	1.390	1.390	1.406	1.195	1.20
Naphthalene	40	3438961	790918	8	0.870	0.870	1.052	17.313	17.31
Acenaphthylene	40	3452688	387827	8	1.781	1.781	1.888	5.709	5.71
Fluorene	40	2197015	387827	8	1.133	1.133	1.322	14.308	14.31
Phenanthrene	40	3057514	587766	8	1.040	1.040	1.219	14.668	14.67
Anthracene	40	2995649	587766	8	1.019	1.019	1.217	16.269	16.23
Fluoranthene	40	3141829	587766	8	1.069	1.069	1.291	17.173	17.17
Benzo (a) anthracene	40	2774396	466225	8	1.190	1.190	1.429	16.722	16.72
Chrysene	40	2776653	466225	8	1.191	1.191	1.307	8.869	8.87
Benzo (b) fluoranthene	40	2935775	474023	8	1.239	1.239	1.497	17.246	17.25
Benzo (k) fluoranthene	40	3062237	474023	8	1.292	1.292	1.507	14.255	14.26
Benzo (a) pyrene	40	2581000	474023	8	1.089	1.089	1.342	18.828	18.83
Indeno (1,2,3-cd) pyrene	40	3015035	474023	8	1.272	1.272	1.599	20.445	20.45
Dibenzo (a,h) anthracene	40	2415066	474023	8	1.019	1.019	1.322	22.943	22.94
Benzo (g,h,i) perylene	40	2605755	474023	8	1.099	1.099	1.242	11.513	11.51

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 10/18/2006SDG: 249177

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1890823	409584	8	0.923	0.923	1.080	14.512	14.51
Pyrene	40	3516258	472145	8	1.489	1.490	1.516	1.772	1.77
Naphthalene	40	3360498	765711	8	0.878	0.878	0.973	9.827	9.83
Acenaphthylene	40	3592195	409584	8	1.754	1.754	1.999	12.250	12.25
Fluorene	40	2313829	409584	8	1.130	1.130	1.251	9.680	9.68
Phenanthrene	40	3405578	661633	8	1.029	1.029	1.175	12.377	12.38
Anthracene	40	3267604	661633	8	0.988	0.988	1.153	14.333	14.33
Fluoranthene	40	3420840	661633	8	1.034	1.034	1.218	15.110	15.11
Benzo (a) anthracene	40	2895454	472145	8	1.227	1.227	1.347	8.942	8.94
Chrysene	40	2826188	472145	8	1.197	1.197	1.307	8.384	8.31
Benzo (b) fluoranthene	40	3090476	493189	8	1.253	1.253	1.438	12.849	12.85
Benzo (k) fluoranthene	40	2994924	493189	8	1.215	1.215	1.376	11.726	11.73
Benzo (a) pyrene	40	2613178	493189	8	1.060	1.060	1.206	12.123	12.12
Indeno (1,2,3-cd) pyrene	40	3069067	493189	8	1.245	1.245	1.459	14.700	14.70
Dibenzo (a,h) anthracene	40	2392881	493189	8	0.970	0.970	1.167	16.883	16.88
Benzo (g,h,i) perylene	40	NA	NA	NA	NA	37.525	40.000	6.188	6.19

IC - initial calibration
 PAH - polynuclear aromatic hydrocarbon
 PCN - polychlorinated naphthalene
 %D - percent difference
 RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 10/23/2006SDG: 249240

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2069862	441570	8	0.938	0.938	1.080	13.196	13.20
Pyrene	40	4083622	570391	8	1.432	1.432	1.516	5.571	5.57
Naphthalene	40	3681163	822445	8	0.895	0.895	0.973	8.036	8.04
Acenaphthylene	40	3898570	441570	8	1.766	1.766	1.999	11.664	11.66
Fluorene	40	2483659	441570	8	1.125	1.125	1.251	10.073	10.07
Phenanthrene	40	3770161	728144	8	1.036	1.036	1.175	11.857	11.86
Anthracene	40	3645470	728144	8	1.001	1.001	1.153	13.157	13.16
Fluoranthene	40	3933975	728144	8	1.081	1.081	1.218	11.294	11.29
Benzo (a) anthracene	40	3823732	570391	8	1.341	1.341	1.347	0.462	0.46
Chrysene	40	2994336	570391	8	1.050	1.050	1.306	19.591	19.59
Benzo (b) fluoranthene	40	3610004	603072	8	1.197	1.197	1.438	16.747	16.75
Benzo (k) fluoranthene	40	3847638	603072	8	1.276	1.276	1.376	7.256	7.26
Benzo (a) pyrene	40	3262753	603072	8	1.082	1.082	1.206	10.271	10.27
Indeno (1,2,3-cd) pyrene	40	3963694	603072	8	1.315	1.315	1.459	9.908	9.91
Dibenzo (a,h) anthracene	40	3174406	603072	8	1.053	1.053	1.167	9.827	9.83
Benzo (g,h,i) perylene	40	NA	NA	NA	NA	39.675	40.000	0.812	0.81

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 30 of 44)

Laboratory: Severn Trent
Calibration Date: 11/2/2006SDG: 249398

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1906961	385012	8	0.991	0.991	1.017	2.564	2.56
Pyrene	40	3668344	553479	8	1.326	1.326	1.274	4.067	4.07
Naphthalene	40	3218097	726562	8	0.886	0.886	0.889	0.359	0.36
Acenaphthylene	40	3196650	385012	8	1.661	1.661	1.699	2.265	2.27
Fluorene	40	2234680	385012	8	1.161	1.161	1.160	0.104	0.10
Phenanthrene	40	3092269	590634	8	1.047	1.047	1.130	7.356	7.36
Anthracene	40	3209474	590634	8	1.087	1.087	1.060	2.540	2.54
Fluoranthene	40	3542272	590634	8	1.199	1.199	1.207	0.654	0.65
Benzo (a) anthracene	40	3270195	553479	8	1.182	1.182	1.306	9.508	9.51
Chrysene	40	NA	NA	NA	NA	43.416	40.000	8.541	8.54
Benzo (b) fluoranthene	40	3444393	518700	8	1.328	1.328	1.469	9.616	9.62
Benzo (k) fluoranthene	40	3316222	518700	8	1.279	1.279	1.315	2.747	2.75
Benzo (a) pyrene	40	2948255	518700	8	1.137	1.137	1.204	5.597	5.60
Indeno (1,2,3-cd) pyrene	40	3320815	518700	8	1.280	1.280	1.368	6.410	6.41
Dibenzo (a,h) anthracene	40	2765759	518700	8	1.066	1.066	1.158	7.925	7.92
Benzo (g,h,i) perylene	40	2941404	518700	8	1.134	1.134	1.128	0.551	0.55

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 11/6/2006SDG: 249439

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1701043	351868	8	0.967	0.967	1.017	4.899	4.90
Pyrene	40	3345151	496503	8	1.347	1.347	1.274	5.789	5.79
Naphthalene	40	2890577	650000	8	0.889	0.889	0.889	0.043	0.04
Acenaphthylene	40	2891688	351864	8	1.644	1.644	1.699	3.260	3.26
Fluorene	40	2024897	351868	8	1.151	1.151	1.160	0.749	0.75
Phenanthrene	40	3026828	571864	8	1.059	1.059	1.130	6.340	6.34
Anthracene	40	2981622	571864	8	1.043	1.043	1.060	1.613	1.61
Fluoranthene	40	3238249	571864	8	1.133	1.133	1.207	6.200	6.20
Benzo (a) anthracene	40	3221093	496503	8	1.298	1.298	1.306	0.639	0.64
Chrysene	40	NA	NA	NA	NA	43.399	40.000	8.497	8.50
Benzo (b) fluoranthene	40	3726297	441859	8	1.687	1.687	1.469	14.785	14.79
Benzo (k) fluoranthene	40	2342004	441859	8	1.060	1.060	1.315	19.374	19.37
Benzo (a) pyrene	40	2587315	441859	8	1.171	1.171	1.204	2.748	2.75
Indeno (1,2,3-cd) pyrene	40	2654198	441859	8	1.201	1.201	1.368	12.189	12.19
Dibenzo (a,h) anthracene	40	2194154	441859	8	0.993	0.993	1.158	14.252	14.25
Benzo (g,h,i) perylene	40	2243799	441859	8	1.016	1.016	1.128	9.957	9.96

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 11/9/2006SDG: 249487

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1704325	374007	8	0.911	0.911	1.017	10.356	10.36
Pyrene	40	3222448	454546	8	1.418	1.418	1.274	11.315	11.32
Naphthalene	40	2839471	647267	8	0.877	0.877	0.889	1.311	1.31
Acenaphthylene	40	2892174	374007	8	1.547	1.547	1.699	8.972	8.97
Fluorene	40	2035537	374007	8	1.089	1.089	1.160	6.134	6.13
Phenanthrene	40	3016008	589998	8	1.022	1.022	1.130	9.543	9.54
Anthracene	40	2924342	589998	8	0.991	0.991	1.060	6.469	6.47
Fluoranthene	40	3175452	589998	8	1.076	1.076	1.207	10.846	10.85
Benzo (a) anthracene	40	2816434	454546	8	1.239	1.239	1.306	5.102	5.10
Chrysene	40	NA	NA	NA	NA	44.316	40.000	10.790	10.79
Benzo (b) fluoranthene	40	2557416	396667	8	1.289	1.289	1.469	12.246	12.25
Benzo (k) fluoranthene	40	2673114	396667	8	1.348	1.348	1.315	2.510	2.51
Benzo (a) pyrene	40	2231871	396667	8	1.125	1.115	1.204	6.550	7.39
Indeno (1,2,3-cd) pyrene	40	2457797	396667	8	1.239	1.239	1.368	9.423	9.42
Dibenzo (a,h) anthracene	40	2020565	396667	8	1.019	1.019	1.158	12.039	12.04
Benzo (g,h,l) perylene	40	2082378	396667	8	1.050	1.050	1.128	6.915	6.91

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 11/9/2006SDG: 249563

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2678602	542240	8	0.988	0.988	1.017	2.822	2.82
Pyrene	40	5115880	809499	8	1.264	1.264	1.274	0.768	0.77
Naphthalene	40	4307096	963727	8	0.894	0.894	0.889	0.541	0.54
Acenaphthylene	40	4456050	542240	8	1.644	1.644	1.699	3.264	3.26
Fluorene	40	3077977	542240	8	1.135	1.135	1.160	2.100	2.10
Phenanthrene	40	4776681	853294	8	1.120	1.120	1.130	0.943	0.94
Anthracene	40	4500443	853294	8	1.055	1.055	1.060	0.475	0.47
Fluoranthene	40	4961709	853294	8	1.163	1.163	1.207	3.680	3.68
Benzo (a) anthracene	40	4707699	809499	8	1.163	1.163	1.306	10.930	10.93
Chrysene	40	NA	NA	NA	NA	46.583	40.000	16.457	16.46
Benzo (b) fluoranthene	40	4260056	906893	8	0.939	0.939	1.469	36.063	36.06
Benzo (k) fluoranthene	40	4914561	906893	8	1.084	1.084	1.315	17.567	17.57
Benzo (a) pyrene	40	4512466	906893	8	0.995	0.995	1.204	17.360	17.36
Indeno (1,2,3-cd) pyrene	40	5327062	906893	8	1.175	1.175	1.368	14.132	14.13
Dibenzo (a,h) anthracene	40	4375900	906893	8	0.965	0.965	1.158	16.679	16.68
Benzo (g,h,i) perylene	40	4516390	906893	8	0.996	0.996	1.128	11.695	11.70

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 12/29/2006SDG: 249944

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1820043	382962	8	0.951	0.951	0.960	0.999	1.00
Pyrene	40	3322390	514389	8	1.292	1.292	1.225	5.475	5.48
Naphthalene	40	3051624	767956	8	0.795	0.795	0.834	4.655	4.65
Acenaphthylene	40	3235931	382962	8	1.690	1.690	1.708	1.048	1.05
Fluorene	40	NA	NA	NA	NA	45.364	40.000	13.410	13.41
Phenanthrene	40	3070610	635488	8	0.966	0.966	1.055	8.413	8.41
Anthracene	40	3057871	635488	8	0.962	0.962	0.984	2.218	2.22
Fluoranthene	40	3309235	635488	8	1.041	1.041	1.103	5.567	5.57
Benzo (a) anthracene	40	NA	NA	NA	NA	42.102	40.000	5.255	5.25
Chrysene	40	2780543	514389	8	1.081	1.081	1.140	5.144	5.14
Benzo (b) fluoranthene	40	3381588	554377	8	1.220	1.220	1.428	14.577	14.58
Benzo (k) fluoranthene	40	2732204	554377	8	0.986	0.986	1.214	18.809	18.81
Benzo (a) pyrene	40	2685621	554377	8	0.969	0.969	1.150	15.731	15.73
Indeno (1,2,3-cd) pyrene	40	3144391	554377	8	1.134	1.134	1.373	17.384	17.38
Dibenzo (a,h) anthracene	40	2569392	554377	8	0.927	0.927	1.113	16.731	16.73
Benzo (g,h,l) perylene	40	2803965	554377	8	1.012	1.012	1.183	14.466	14.46

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 1/31/2006SDG: 250165

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	3357148	637712	8	1.053	1.053	1.013	3.909	3.91
Pyrene	40	6233316	984535	8	1.266	1.266	1.290	1.807	1.81
Naphthalene	40	5296207	1225215	8	0.865	0.865	0.906	4.530	4.53
Acenaphthylene	40	5986664	637712	8	1.878	1.878	1.858	1.030	1.03
Fluorene	40	3981700	637712	8	1.249	1.249	1.189	5.035	5.03
Phenanthrene	40	6303989	1043922	8	1.208	1.208	1.151	4.939	4.94
Anthracene	40	5885228	1043922	8	1.128	1.128	1.102	2.331	2.33
Fluoranthene	40	5925399	1043922	8	1.135	1.135	1.115	1.770	1.77
Benzo (a) anthracene	40	5989691	984535	8	1.217	1.217	1.344	9.449	9.45
Chrysene	40	5624323	984535	8	1.143	1.143	1.206	5.271	5.27
Benzo (b) fluoranthene	40	6470108	963359	8	1.343	1.343	1.453	7.549	7.55
Benzo (k) fluoranthene	40	6035697	963359	8	1.253	1.253	1.307	4.104	4.10
Benzo (a) pyrene	40	5540617	963359	8	1.150	1.150	1.250	7.961	7.96
Indeno (1,2,3-cd) pyrene	40	6652724	963359	8	1.381	1.381	1.456	5.143	5.14
Dibenzo (a,h) anthracene	40	5391030	963359	8	1.119	1.119	1.233	9.228	9.23
Benzo (g,h,l) perylene	40	5575740	963359	8	1.158	1.158	1.144	1.155	1.15

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 2/2/2007SDG: 250183

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	NA	NA	NA	NA	43.883	40.000	9.707	9.71
Pyrene	40	4468048	670584	8	1.333	1.333	1.390	4.110	4.11
Naphthalene	40	4175681	1031100	8	0.810	0.810	0.828	2.220	2.22
Acenaphthylene	40	NA	NA	NA	NA	44.651	40.000	11.626	11.63
Fluorene	40	2939237	587472	8	1.001	1.006	1.098	8.866	8.87
Phenanthrene	40	NA	NA	NA	NA	42.805	40.000	7.013	7.01
Anthracene	40	3938913	883205	8	0.892	0.892	0.931	4.203	4.20
Fluoranthene	40	4384031	883205	8	0.993	0.993	1.075	7.615	7.62
Benzo (a) anthracene	40	4124614	670584	8	1.230	1.230	1.296	5.056	5.06
Chrysene	40	3616984	670584	8	1.079	1.079	1.194	9.675	9.67
Benzo (b) fluoranthene	40	NA	NA	NA	NA	44.557	40.000	11.393	11.39
Benzo (k) fluoranthene	40	3783436	701630	8	1.078	1.078	1.373	21.426	21.43
Benzo (a) pyrene	40	NA	NA	NA	NA	42.636	40.000	6.590	6.59
Indeno (1,2,3-cd) pyrene	40	4172264	701630	8	1.189	1.189	1.199	0.830	0.83
Dibenzo (a,h) anthracene	40	NA	NA	NA	NA	44.273	40.000	10.683	10.68
Benzo (g,h,l) perylene	40	3827606	701630	8	1.091	1.091	0.992	9.984	9.98

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent
Calibration Date: 2/5/2007SDG: 250195

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	3586504	654113	8	1.097	1.097	1.013	8.225	8.23
Pyrene	40	7053078	1091901	8	1.292	1.292	1.290	0.181	0.18
Naphthalene	40	6027310	1313868	8	0.917	0.917	0.906	1.318	1.32
Acenaphthylene	40	6677374	654113	8	2.042	2.042	1.858	9.860	9.86
Fluorene	40	4292420	654113	8	1.312	1.312	1.189	10.392	10.39
Phenanthrene	40	6932554	1152386	8	1.203	1.203	1.151	4.540	4.54
Anthracene	40	6494371	1152386	8	1.127	1.127	1.102	2.294	2.29
Fluoranthene	40	6641906	1152386	8	1.153	1.153	1.115	3.340	3.34
Benzo (a) anthracene	40	7110499	1091901	8	1.302	1.302	1.344	3.075	3.07
Chrysene	40	6291904	1091901	8	1.152	1.152	1.206	4.448	4.45
Benzo (b) fluoranthene	40	7261145	1147184	8	1.266	1.266	1.453	12.871	12.87
Benzo (k) fluoranthene	40	7391722	1147184	8	1.289	1.289	1.307	1.378	1.38
Benzo (a) pyrene	40	6462080	1147184	8	1.127	1.127	1.250	9.856	9.86
Indeno (1,2,3-cd) pyrene	40	7832301	1147184	8	1.365	1.365	1.456	6.219	6.22
Dibenzo (a,h) anthracene	40	6377549	1147184	8	1.112	1.112	1.233	9.825	9.82
Benzo (g,h,i) perylene	40	6466620	1147184	8	1.127	1.127	1.144	1.482	1.48

IC - initial calibration
 PAH - polynuclear aromatic hydrocarbon
 PCN - polychlorinated naphthalene
 %D - percent difference
 RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Test America
Calibration Date: 5/24/2007SDG: 500-4270

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2408802	465917	8	1.034	1.034	1.067	3.101	3.10
Pyrene	40	4409765	738598	8	1.194	1.194	1.267	5.722	5.72
Naphthalene	40	3928971	896486	8	0.877	0.877	0.892	1.689	1.69
Acenaphthylene	40	4293775	465917	8	1.843	1.843	1.879	1.916	1.92
Fluorene	40	2909390	465917	8	1.249	1.249	1.228	1.673	1.68
Phenanthrene	40	4259345	802141	8	1.062	1.062	1.131	6.098	6.10
Anthracene	40	4187407	802141	8	1.044	1.044	1.090	4.255	4.26
Fluoranthene	40	4337443	802141	8	1.081	1.081	1.128	4.159	4.16
Benzo (a) anthracene	40	3875630	738598	8	1.049	1.049	1.234	14.963	14.96
Chrysene	40	3898417	738598	8	1.056	1.056	1.105	4.479	4.48
Benzo (b) fluoranthene	40	4165070	686517	8	1.213	1.213	1.259	3.608	3.61
Benzo (k) fluoranthene	40	3941295	686517	8	1.148	1.148	1.177	2.437	2.44
Benzo (a) pyrene	40	3513834	686517	8	1.024	1.024	1.079	5.117	5.12
Indeno (1,2,3-cd) pyrene	40	4051353	686517	8	1.180	1.180	1.297	9.009	9.01
Dibenzo (a,h) anthracene	40	3355430	686517	8	0.978	0.978	1.079	9.427	9.43
Benzo (g,h,i) perylene	40	3603331	686517	8	1.050	1.050	1.072	2.074	2.07

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Test America
Calibration Date: 5/24/2007SDG: 500-4317

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	3870901	705861	8	1.097	1.097	1.103	0.606	0.61
Pyrene	40	8122837	1267928	8	1.281	1.281	1.377	6.967	6.97
Naphthalene	40	6384432	1270223	8	1.005	1.005	1.052	4.480	4.48
Acenaphthylene	40	7133704	705861	8	2.021	2.021	1.952	3.558	3.56
Fluorene	40	4765123	705861	8	1.350	1.350	1.432	5.721	5.72
Phenanthrene	40	7323730	1254804	8	1.167	1.167	1.239	5.793	5.79
Anthracene	40	6900817	1254804	8	1.100	1.100	1.207	8.896	8.90
Fluoranthene	40	7833241	1254804	8	1.249	1.249	1.321	5.495	5.50
Benzo (a) anthracene	40	7932992	1267928	8	1.251	1.251	1.326	5.652	5.65
Chrysene	40	6964067	1267928	8	1.098	1.099	1.202	8.603	8.60
Benzo (b) fluoranthene	40	7249484	1092081	8	1.328	1.328	1.342	1.063	1.07
Benzo (k) fluoranthene	40	8012003	1092081	8	1.467	1.467	1.343	9.278	9.28
Benzo (a) pyrene	40	6341928	1092081	8	1.161	1.161	1.151	0.948	0.95
Indeno (1,2,3-cd) pyrene	40	7427930	1092081	8	1.360	1.360	1.330	2.276	2.28
Dibenzo (a,h) anthracene	40	6058864	1092081	8	1.110	1.110	1.095	1.330	1.33
Benzo (g,h,l) perylene	40	6164406	1092081	8	1.129	1.129	1.122	0.582	0.58

IC - initial calibration
 PAH - polynuclear aromatic hydrocarbon
 PCN - polychlorinated naphthalene
 %D - percent difference
 RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 40 of 44)

Laboratory: Test America
Calibration Date: 5/31/2007SDG: 500-4427

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	1758633	339950	8	1.035	1.035	1.067	3.041	3.04
Pyrene	40	2967279	445264	8	1.333	1.333	1.267	5.230	5.23
Naphthalene	40	3010452	678498	8	0.887	0.887	0.892	0.471	0.47
Acenaphthylene	40	3080731	339950	8	1.812	1.812	1.879	3.549	3.55
Fluorene	40	2041592	339950	8	1.201	1.201	1.228	2.217	2.22
Phenanthrene	40	3079176	540272	8	1.140	1.140	1.131	0.787	0.79
Anthracene	40	2790440	540272	8	1.033	1.033	1.090	5.272	5.27
Fluoranthene	40	2907537	540272	8	1.076	1.076	1.128	4.615	4.61
Benzo (a) anthracene	40	2620803	445264	8	1.177	1.177	1.234	4.613	4.61
Chrysene	40	2434577	445264	8	1.094	1.094	1.105	1.048	1.05
Benzo (b) fluoranthene	40	2796056	448173	8	1.248	1.248	1.259	0.878	0.88
Benzo (k) fluoranthene	40	2731698	448173	8	1.219	1.219	1.177	3.582	3.58
Benzo (a) pyrene	40	2381382	448173	8	1.063	1.063	1.079	1.499	1.50
Indeno (1,2,3-cd) pyrene	40	2779380	448173	8	1.240	1.240	1.297	4.379	4.38
Dibenzo (a,h) anthracene	40	2242463	448173	8	1.001	1.007	1.079	7.278	7.28
Benzo (g,h,i) perylene	40	2448452	448173	8	1.093	1.093	1.072	1.928	1.93

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Test America
Calibration Date: 6/4/2007SDG: 500-4472

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Acenaphthene	40	2165868	434430	8	0.997	0.997	1.067	6.558	6.56
Pyrene	40	4247127	683846	8	1.242	1.242	1.267	1.930	1.93
Naphthalene	40	3441756	805205	8	0.855	0.855	0.892	4.118	4.12
Acenaphthylene	40	3806881	434430	8	1.753	1.753	1.879	6.736	6.74
Fluorene	40	2578921	434430	8	1.187	1.187	1.228	3.344	3.34
Phenanthrene	40	3676305	712016	8	1.033	1.033	1.131	8.693	8.69
Anthracene	40	3589712	712016	8	1.008	1.008	1.090	7.532	7.53
Fluoranthene	40	4099583	712016	8	1.152	1.152	1.128	2.051	2.05
Benzo (a) anthracene	40	4044044	683846	8	1.183	1.183	1.234	4.164	4.16
Chrysene	40	3521364	683846	8	1.030	1.030	1.105	6.809	6.81
Benzo (b) fluoranthene	40	4529582	733602	8	1.235	1.235	1.259	1.900	1.90
Benzo (k) fluoranthene	40	4024150	733602	8	1.097	1.097	1.177	6.779	6.78
Benzo (a) pyrene	40	3750784	733602	8	1.023	1.023	1.079	5.220	5.22
Indeno (1,2,3-cd) pyrene	40	4460148	733602	8	1.216	1.216	1.297	6.257	6.26
Dibenzo (a,h) anthracene	40	3693041	733602	8	1.007	1.007	1.079	6.712	6.71
Benzo (g,h,i) perylene	40	3955086	733602	8	1.078	1.078	1.072	0.587	0.59

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Test America
Calibration Date: 6/4/2007SDG: 500-5265

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Monochloronaphthalene	5	395704	495307	8	1.278	1.278	1.234	3.627	3.63
Dichloronaphthalene	5	404744	495307	8	1.307	1.307	1.389	5.875	5.88
Trichloronaphthalene	5	204595	731785	8	0.447	0.447	0.469	4.593	4.59
Tetrachloronaphthalene	5	197614	731785	8	0.432	0.432	0.418	3.383	3.38
Pentachloronaphthalene	5	153755	639823	8	0.384	0.384	0.368	4.405	4.41
Hexachloronaphthalene	5	137273	639823	8	0.343	0.343	0.305	12.506	12.51
Heptachloronaphthalene	5	97604	639823	8	0.244	0.244	0.197	23.960	23.96
Octachloronaphthalene	5	86743	667674	8	0.208	0.208	0.189	9.809	9.81

Laboratory: Test America
Calibration Date: 6/4/2007SDG: 500-5285

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Monochloronaphthalene	5	286502	364554	8	1.257	1.235	1.234	1.940	1.94
Dichloronaphthalene	5	287972	364554	8	1.264	1.389	1.389	9.011	9.01
Trichloronaphthalene	5	140018	518928	8	0.432	0.469	0.469	7.924	7.92
Tetrachloronaphthalene	5	136075	518928	8	0.420	0.418	0.418	0.389	0.39
Pentachloronaphthalene	5	105519	431239	8	0.392	0.368	0.368	6.308	6.31
Hexachloronaphthalene	5	89340	431239	8	0.331	0.305	0.305	8.637	8.64
Heptachloronaphthalene	5	61271	430379	8	0.228	0.197	0.197	15.685	15.45
Octachloronaphthalene	5	53293	430379	8	0.198	0.189	0.189	4.662	4.66

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Test America
Calibration Date: 6/4/2007

SDG: 500-5933

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Monochloronaphthalene	5	611396	797776	8	1.226	1.226	1.388	11.681	11.68
Dichloronaphthalene	5	654802	797776	8	1.313	1.313	1.395	5.861	5.86
Trichloronaphthalene	5	339266	1215502	8	0.447	5.205	5.000	4.092	4.09
Tetrachloronaphthalene	5	324635	1215502	8	0.427	0.427	0.478	10.603	10.60
Pentachloronaphthalene	5	291422	1188599	8	0.392	0.392	0.432	9.217	9.22
Hexachloronaphthalene	5	227105	1188599	8	0.306	0.306	0.411	25.560	25.56
Heptachloronaphthalene	5	151822	1169597	8	0.208	3.981	5.000	20.381	20.38
Octachloronaphthalene	5	140364	1169597	8	0.192	0.192	0.222	13.580	13.58

Laboratory: Test America
Calibration Date: 6/4/2007

SDG: 500-5954

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Monochloronaphthalene	5	611396	797776	8	1.226	1.226	1.388	11.681	11.68
Dichloronaphthalene	5	654802	797776	8	1.313	1.313	1.395	5.861	5.86
Trichloronaphthalene	5	339266	1215502	8	0.447	5.205	5.000	4.092	4.09
Tetrachloronaphthalene	5	324635	1215502	8	0.427	0.427	0.478	10.603	10.60
Pentachloronaphthalene	5	291422	1188599	8	0.392	0.392	0.432	9.217	9.22
Hexachloronaphthalene	5	227105	1188599	8	0.306	0.306	0.411	25.560	25.56
Heptachloronaphthalene	5	151822	1169597	8	0.208	3.981	5.000	20.381	20.38
Octachloronaphthalene	5	140364	1169597	8	0.192	0.192	0.222	13.580	13.58

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-2

PAH/PCN Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 44 of 44)

Laboratory: Test America
Calibration Date: 10/8/2008SDG: 500-14347

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Ais	Cis	Recalculated CCV RF	Reported CCV RF	IC RF	Recalculated %D	Reported %D
Naphthalene	40	3709606	852948	8	0.870	0.870	0.915	4.936	4.90
Acenaphthylene	40	3671089	400255	8	1.834	1.834	1.908	3.859	3.90
Acenaphthene	40	1952898	400255	8	0.976	0.976	1.020	4.331	4.40
Fluorene	40	2274967	400255	8	1.137	1.137	1.171	2.924	3.00
Phenanthrene	40	2972311	588723	8	1.010	1.010	1.099	8.121	8.10
Anthracene	40	3003667	588723	8	1.020	1.020	1.106	7.740	7.70
Fluoranthene	40	2986253	588723	8	1.014	1.014	1.219	16.777	16.80
Pyrene	40	3135651	522160	8	1.201	1.201	1.226	2.037	2.00
Benzo (a) anthracene	40	4044044	522160	8	1.549	1.113	1.146	35.163	2.90
Chrysene	40	2800291	522160	8	1.073	1.073	1.003	6.937	7.00
Benzo (b) fluoranthene	40	3547348	644142	8	1.101	1.101	1.118	1.483	1.50
Benzo (k) fluoranthene	40	3198426	644142	8	0.993	0.993	1.055	5.869	5.90
Benzo (a) pyrene	40	2983127	644142	8	0.926	0.926	0.960	3.517	3.50
Indeno (1,2,3-cd) pyrene	40	3436156	644142	8	1.067	1.067	1.121	4.827	4.90
Dibenzo (a,h) anthracene	40	2837617	644142	8	0.881	0.881	0.935	5.729	5.70
Benzo (g,h,i) perylene	40	2972973	644142	8	0.923	0.923	0.941	1.915	1.90

IC - initial calibration
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
%D - percent difference
RF - response factor

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 39)

Laboratory: Severn Trent/Test America

SDG: SEE BELOW

Percent recovery (%R) = $\frac{SF}{SS} \times 100$

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-CP1(0.5)	247532	2-Fluorobiphenyl	5	3.36536	67.31	67	Y
		Nitrobenzene-d5	5	3.36867	67.37	67	Y
		Terphenyl-d14	5	4.13494	82.70	83	Y
JPM3-ITF-CP2(0.5)	247532	2-Fluorobiphenyl	5	4.25679	85.14	85	Y
		Nitrobenzene-d5	5	2.0817	41.63	42	Y
		Terphenyl-d14	5	4.99586	99.92	100	Y
JPM3-ITF-CP3(0.5)	247532	2-Fluorobiphenyl	5	3.74469	74.89	75	Y
		Nitrobenzene-d5	5	3.65989	73.20	73	Y
		Terphenyl-d14	5	4.3744	87.49	87	Y
JPM3-ITF-CP4(0.5)	247532	2-Fluorobiphenyl	25	15.9054	63.62	64	Y
		Nitrobenzene-d5	25	16.2156	64.86	65	Y
		Terphenyl-d14	25	17.3044	69.22	69	Y
JPM3-ITF-CP5(0.5)	247532	2-Fluorobiphenyl	25	17.422	69.69	70	Y
		Nitrobenzene-d5	25	19.4951	77.98	78	Y
		Terphenyl-d14	25	20.9276	83.71	84	Y
JPM3-ITF-CP6(0.5)	247532	2-Fluorobiphenyl	5	3.16248	63.25	63	Y
		Nitrobenzene-d5	5	2.73455	54.69	55	Y
		Terphenyl-d14	5	4.04699	80.94	81	Y
JPM3-ITF-CP7(0.5)	247532	2-Fluorobiphenyl	5	3.53279	70.66	71	Y
		Nitrobenzene-d5	5	2.99155	59.83	60	Y
		Terphenyl-d14	5	4.48783	89.76	90	Y
JPM3-ITF-CP8(0.5)	247532	2-Fluorobiphenyl	5	3.75987	75.20	75	Y
		Nitrobenzene-d5	5	2.15088	43.02	43	Y
		Terphenyl-d14	5	4.3315	86.63	87	Y
JPM3-ITF-CP9(0.5)	247532	2-Fluorobiphenyl	5	3.25383	65.08	65	Y
		Nitrobenzene-d5	5	2.46925	49.39	49	Y
		Terphenyl-d14	5	4.3286	86.57	87	Y
JPM3-ITF-CP10(0.5)	247532	2-Fluorobiphenyl	5	3.58864	71.77	72	Y
		Nitrobenzene-d5	5	2.61692	52.34	52	Y
		Terphenyl-d14	5	4.33292	86.66	87	Y
JPM3-ITF-CP11(0.5)	247532	2-Fluorobiphenyl	5	3.7139	74.28	74	Y
		Nitrobenzene-d5	5	1.78614	35.72	36	Y
		Terphenyl-d14	5	4.51373	90.27	90	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-CP12(0.5)	247532	2-Fluorobiphenyl	5	3.80195	76.04	76	Y
		Nitrobenzene-d5	5	2.37437	47.49	47	Y
		Terphenyl-d14	5	4.88697	97.74	98	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-CP13(0.5)	247532	2-Fluorobiphenyl	5	3.40368	68.07	68	Y
		Nitrobenzene-d5	5	2.42289	48.46	48	Y
		Terphenyl-d14	5	4.11165	82.23	82	Y
JPM3-ITF-CP14(0.5)	247532	2-Fluorobiphenyl	5	3.84724	76.94	77	Y
		Nitrobenzene-d5	5	2.84301	56.86	57	Y
		Terphenyl-d14	5	4.61219	92.24	92	Y
JPM3-ITF-CP15(0.5)	247532	2-Fluorobiphenyl	5	4.16604	83.32	83	Y
		Nitrobenzene-d5	5	3.06909	61.38	61	Y
		Terphenyl-d14	5	5.28136	105.63	106	Y
JPM3-ITF-CP16(0.5)	247532	2-Fluorobiphenyl	25	15.3015	61.21	61	Y
		Nitrobenzene-d5	25	15.2234	60.89	61	Y
		Terphenyl-d14	25	16.8915	67.57	68	Y
JPM3-ITF-CP17(0.5)	247532	2-Fluorobiphenyl	5	3.62383	72.48	72	Y
		Nitrobenzene-d5	5	2.92945	58.59	59	Y
		Terphenyl-d14	5	4.63299	92.66	93	Y
JPM3-ITF-CP18(0.5)	247532	2-Fluorobiphenyl	5	4.22287	84.46	84	Y
		Nitrobenzene-d5	5	3.57111	71.42	71	Y
		Terphenyl-d14	5	5.24289	104.86	105	Y
JPM3-ITF-CP19(0.5)	247532	2-Fluorobiphenyl	5	4.27772	85.55	86	Y
		Nitrobenzene-d5	5	2.66033	53.21	53	Y
		Terphenyl-d14	5	5.16919	103.38	103	Y
JPM3-ITF-CP20(0.5)	247532	2-Fluorobiphenyl	25	13.7947	55.18	55	Y
		Nitrobenzene-d5	25	13.492	53.97	54	Y
		Terphenyl-d14	25	17.6395	70.56	71	Y
JPM3-ITF-CP21(0.5)	247532	2-Fluorobiphenyl	5	D	D	D	Y
		Nitrobenzene-d5	5	D	D	D	Y
		Terphenyl-d14	5	D	D	D	Y
JPM3-ITF-CP22(0.5)	247532	2-Fluorobiphenyl	25	13.0986	52.39	52	Y
		Nitrobenzene-d5	25	13.6971	54.79	55	Y
		Terphenyl-d14	25	14.0703	56.28	56	Y
JPM3-ITF-CP23(0.5)	247532	2-Fluorobiphenyl	5	3.66246	73.25	73	Y
		Nitrobenzene-d5	5	3.48229	69.65	70	Y
		Terphenyl-d14	5	4.30353	86.07	86	Y

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 3 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-CP24(0.5)	247532	2-Fluorobiphenyl	5	3.78245	75.65	76	Y
		Nitrobenzene-d5	5	3.34828	66.97	67	Y
		Terphenyl-d14	5	4.45362	89.07	89	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-CP25(0.5)	247532	2-Fluorobiphenyl	5	3.47789	69.56	70	Y
		Nitrobenzene-d5	5	3.27172	65.43	65	Y
		Terphenyl-d14	5	3.96561	79.31	79	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF1	247700	2-Fluorobiphenyl	25	18.4055	73.62	74	Y
		Nitrobenzene-d5	25	16.5064	66.03	66	Y
		Terphenyl-d14	25	24.827	99.31	99	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF2	247700	2-Fluorobiphenyl	25	18.5272	74.11	74	Y
		Nitrobenzene-d5	25	18.1183	72.47	72	Y
		Terphenyl-d14	25	28.3265	113.31	113	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF3	247700	2-Fluorobiphenyl	25	22.8592	91.44	91	Y
		Nitrobenzene-d5	25	21.6417	86.57	87	Y
		Terphenyl-d14	25	25.5483	102.19	102	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF4	247700	2-Fluorobiphenyl	25	19.3925	77.57	78	Y
		Nitrobenzene-d5	25	19.9438	79.78	80	Y
		Terphenyl-d14	25	24.8861	99.54	100	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF5	247700	2-Fluorobiphenyl	5	4.25089	85.02	85	Y
		Nitrobenzene-d5	5	3.66576	73.32	73	Y
		Terphenyl-d14	5	5.34151	106.83	107	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF6	247700	2-Fluorobiphenyl	25	20.1055	80.42	80	Y
		Nitrobenzene-d5	25	19.3975	77.59	78	Y
		Terphenyl-d14	25	26.4535	105.81	106	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF7	247700	2-Fluorobiphenyl	25	17.4815	69.93	70	Y
		Nitrobenzene-d5	25	17.0479	68.19	68	Y
		Terphenyl-d14	25	24.6532	98.61	99	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF8	247700	2-Fluorobiphenyl	25	17.1417	68.57	69	Y
		Nitrobenzene-d5	25	16.2342	64.94	65	Y
		Terphenyl-d14	25	23.3904	93.56	94	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF9	247700	2-Fluorobiphenyl	25	14.4709	57.88	58	Y
		Nitrobenzene-d5	25	16.3265	65.31	65	Y
		Terphenyl-d14	25	28.0412	112.16	112	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF10	247700	2-Fluorobiphenyl	25	19.0995	76.40	76	Y
		Nitrobenzene-d5	25	18.3445	73.38	73	Y
		Terphenyl-d14	25	27.1007	108.40	108	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AP1	247700	2-Fluorobiphenyl	5	4.66454	93.29	93	Y
		Nitrobenzene-d5	5	4.28844	85.77	86	Y
		Terphenyl-d14	5	5.65338	113.07	113	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AP2	247700	2-Fluorobiphenyl	25	20.2494	81.00	81	Y
		Nitrobenzene-d5	25	18.6419	74.57	75	Y
		Terphenyl-d14	25	23.4229	93.69	94	Y
JPM3-ITF-AP3	247700	2-Fluorobiphenyl	25	18.8826	75.53	76	Y
		Nitrobenzene-d5	25	17.2444	68.98	69	Y
		Terphenyl-d14	25	24.6379	98.55	99	Y
JPM3-ITF-AP4	247700	2-Fluorobiphenyl	25	20.7366	82.95	83	Y
		Nitrobenzene-d5	25	18.7935	75.17	75	Y
		Terphenyl-d14	25	25.8771	103.51	104	Y
JPM3-ITF-AP5	247700	2-Fluorobiphenyl	25	16.2445	64.98	65	Y
		Nitrobenzene-d5	25	15.7556	63.02	63	Y
		Terphenyl-d14	25	26.0226	104.09	104	Y
JPM3-ITF-AP8(1)	247748	2-Fluorobiphenyl	25	19.1404	76.56	77	Y
		Nitrobenzene-d5	25	16.8989	67.60	68	Y
		Terphenyl-d14	25	18.2186	72.87	73	Y
JPM3-ITF-AP9(1)	247748	2-Fluorobiphenyl	25	19.8576	79.43	79	Y
		Nitrobenzene-d5	25	18.6753	74.70	75	Y
		Terphenyl-d14	25	24.8153	99.26	99	Y
JPM3-ITF-AF11(1)	247748	2-Fluorobiphenyl	25	17.919	71.68	72	Y
		Nitrobenzene-d5	25	17.7572	71.03	71	Y
		Terphenyl-d14	25	24.0873	96.35	96	Y
JPM3-ITF-AF11(3)	247748	2-Fluorobiphenyl	25	18.4668	73.87	74	Y
		Nitrobenzene-d5	25	16.954	67.82	68	Y
		Terphenyl-d14	25	20.7252	82.90	83	Y
JPM3-ITF-AF12(2)	247748	2-Fluorobiphenyl	25	16.5339	66.14	66	Y
		Nitrobenzene-d5	25	16.1223	64.49	64	Y
		Terphenyl-d14	25	18.7829	75.13	75	Y
JPM3-ITF-AF13(2)	247748	2-Fluorobiphenyl	25	19.3893	77.56	78	Y
		Nitrobenzene-d5	25	18.1596	72.64	73	Y
		Terphenyl-d14	25	20.045	80.18	80	Y
JPM3-ITF-AF14(2)	247748	2-Fluorobiphenyl	25	18.0715	72.29	72	Y
		Nitrobenzene-d5	25	17.7047	70.82	71	Y
		Terphenyl-d14	25	22.369	89.48	89	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 5 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF15(2)	247748	2-Fluorobiphenyl	25	18.9322	75.73	76	Y
		Nitrobenzene-d5	25	18.4635	73.85	74	Y
		Terphenyl-d14	25	22.6191	90.48	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF16(2)	247748	2-Fluorobiphenyl	25	13.2074	52.83	53	Y
		Nitrobenzene-d5	25	16.8203	67.28	67	Y
		Terphenyl-d14	25	16.6619	66.65	67	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF17(2)	247748	2-Fluorobiphenyl	25	17.7503	71.00	71	Y
		Nitrobenzene-d5	25	17.5652	70.26	70	Y
		Terphenyl-d14	25	21.7873	87.15	87	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF19(2)	247748	2-Fluorobiphenyl	25	20.396	81.58	82	Y
		Nitrobenzene-d5	25	16.0185	64.07	64	Y
		Terphenyl-d14	25	19.2828	77.13	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF20(2)	247748	2-Fluorobiphenyl	25	18.15	72.60	73	Y
		Nitrobenzene-d5	25	16.9206	67.68	68	Y
		Terphenyl-d14	25	22.5266	90.11	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF20(2)D	247748	2-Fluorobiphenyl	25	16.5677	66.27	66	Y
		Nitrobenzene-d5	25	16.2424	64.97	65	Y
		Terphenyl-d14	25	20.1065	80.43	80	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF21(2)	247748	2-Fluorobiphenyl	25	16.5355	66.14	66	Y
		Nitrobenzene-d5	25	14.9862	59.94	60	Y
		Terphenyl-d14	25	21.6484	86.59	87	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF22(3)	247748	2-Fluorobiphenyl	25	14.9487	59.79	60	Y
		Nitrobenzene-d5	25	14.5325	58.13	58	Y
		Terphenyl-d14	25	20.11	80.44	80	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF23(2)	247748	2-Fluorobiphenyl	25	16.5082	66.03	66	Y
		Nitrobenzene-d5	25	15.7976	63.19	63	Y
		Terphenyl-d14	25	20.7182	82.87	83	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF24(2)	247748	2-Fluorobiphenyl	25	11.5216	46.09	46	Y
		Nitrobenzene-d5	25	16.9988	68.00	68	Y
		Terphenyl-d14	25	19.2888	77.16	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF25(2)	247748	2-Fluorobiphenyl	25	15.4059	61.62	62	Y
		Nitrobenzene-d5	25	14.523	58.09	58	Y
		Terphenyl-d14	25	18.6938	74.78	75	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF24(2)D	247748	2-Fluorobiphenyl	25	18.3237	73.29	73	Y
		Nitrobenzene-d5	25	16.8746	67.50	67	Y
		Terphenyl-d14	25	25.6193	102.48	102	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 6 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AP16(1)	247836	2-Fluorobiphenyl	25	20.6717	82.69	83	Y
		Nitrobenzene-d5	25	17.511	70.04	70	Y
		Terphenyl-d14	25	22.0804	88.32	88	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP17(1)	247836	2-Fluorobiphenyl	25	19.3551	77.42	77	Y
		Nitrobenzene-d5	25	17.2176	68.87	69	Y
		Terphenyl-d14	25	19.965	79.86	80	Y
JPM3-ITF-AP18(1)	247836	2-Fluorobiphenyl	25	19.773	79.09	79	Y
		Nitrobenzene-d5	25	16.9441	67.78	68	Y
		Terphenyl-d14	25	21.8118	87.25	87	Y
JPM3-ITF-AP19(1)	247836	2-Fluorobiphenyl	25	17.7148	70.86	71	Y
		Nitrobenzene-d5	25	11.7809	47.12	47	Y
		Terphenyl-d14	25	22.4671	89.87	90	Y
JPM3-ITF-AP21(1)	247836	2-Fluorobiphenyl	25	16.2622	65.05	65	Y
		Nitrobenzene-d5	25	14.1662	56.66	57	Y
		Terphenyl-d14	25	17.1766	68.71	69	Y
JPM3-ITF-AF36(3)	247836	2-Fluorobiphenyl	25	19.5351	78.14	78	Y
		Nitrobenzene-d5	25	15.9114	63.65	64	Y
		Terphenyl-d14	25	20.1752	80.70	81	Y
JPM3-ITF-AF37(3)	247836	2-Fluorobiphenyl	25	18.8698	75.48	75	Y
		Nitrobenzene-d5	25	16.824	67.30	67	Y
		Terphenyl-d14	25	20.8924	83.57	84	Y
JPM3-ITF-AF38(2)	247836	2-Fluorobiphenyl	25	19.5933	78.37	78	Y
		Nitrobenzene-d5	25	17.8181	71.27	71	Y
		Terphenyl-d14	25	21.1071	84.43	84	Y
JPM3-ITF-AF39(2)	247836	2-Fluorobiphenyl	25	16.5435	66.17	66	Y
		Nitrobenzene-d5	25	6.13509	24.54	25	Y
		Terphenyl-d14	25	19.8692	79.48	79	Y
JPM3-ITF-AF40(2)	247836	2-Fluorobiphenyl	25	17.203	68.81	69	Y
		Nitrobenzene-d5	25	15.3332	61.33	61	Y
		Terphenyl-d14	25	19.608	78.43	78	Y
JPM3-ITF-AF41(2)	247836	2-Fluorobiphenyl	25	20.3286	81.31	81	Y
		Nitrobenzene-d5	25	18.4271	73.71	74	Y
		Terphenyl-d14	25	22.8709	91.48	91	Y
JPM3-ITF-AF42(2)	247836	2-Fluorobiphenyl	25	15.4796	61.92	62	Y
		Nitrobenzene-d5	25	13.5851	54.34	54	Y
		Terphenyl-d14	25	18.667	74.67	75	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 7 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF43(2)	247836	2-Fluorobiphenyl	25	16.6004	66.40	66	Y
		Nitrobenzene-d5	25	13.5104	54.04	54	Y
		Terphenyl-d14	25	19.728	78.91	79	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF44(2)	247836	2-Fluorobiphenyl	25	20.0938	80.38	80	Y
		Nitrobenzene-d5	25	17.7634	71.05	71	Y
		Terphenyl-d14	25	21.1349	84.54	85	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP12(1)	247811	2-Fluorobiphenyl	25	16.6849	66.74	67	Y
		Nitrobenzene-d5	25	13.8184	55.27	55	Y
		Terphenyl-d14	25	18.4161	73.66	74	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP13(1)	247811	2-Fluorobiphenyl	25	19.6646	78.66	79	Y
		Nitrobenzene-d5	25	17.2706	69.08	69	Y
		Terphenyl-d14	25	20.2137	80.85	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP14(1)	247811	2-Fluorobiphenyl	25	16.9067	67.63	68	Y
		Nitrobenzene-d5	25	8.24726	32.99	33	Y
		Terphenyl-d14	25	20.2539	81.02	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP15(1)	247811	2-Fluorobiphenyl	25	19.6185	78.47	78	Y
		Nitrobenzene-d5	25	16.5955	66.38	66	Y
		Terphenyl-d14	25	22.2259	88.90	89	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF28(2)	247811	2-Fluorobiphenyl	25	14.5461	58.18	58	Y
		Nitrobenzene-d5	25	3.38641	13.55	14	Y
		Terphenyl-d14	25	21.5891	86.36	86	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF29(2)	247811	2-Fluorobiphenyl	25	19.8199	79.28	79	Y
		Nitrobenzene-d5	25	15.9969	63.99	64	Y
		Terphenyl-d14	25	22.3307	89.32	89	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF30(2)	247811	2-Fluorobiphenyl	25	17.9484	71.79	72	Y
		Nitrobenzene-d5	25	15.8953	63.58	64	Y
		Terphenyl-d14	25	21.3811	85.52	86	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF31(2)	247811	2-Fluorobiphenyl	25	20.5245	82.10	82	Y
		Nitrobenzene-d5	25	18.7279	74.91	75	Y
		Terphenyl-d14	25	21.8652	87.46	87	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF32(2)	247811	2-Fluorobiphenyl	25	19.0145	76.06	76	Y
		Nitrobenzene-d5	25	16.913	67.65	68	Y
		Terphenyl-d14	25	20.3855	81.54	82	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF33(2)	247811	2-Fluorobiphenyl	25	19.1527	76.61	77	Y
		Nitrobenzene-d5	25	17.2348	68.94	69	Y
		Terphenyl-d14	25	20.1243	80.50	80	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 8 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF34(2)	247811	2-Fluorobiphenyl	25	18.5773	74.31	74	Y
		Nitrobenzene-d5	25	16.8517	67.41	67	Y
		Terphenyl-d14	25	19.7597	79.04	79	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF35(2)	247811	2-Fluorobiphenyl	25	19.2357	76.94	77	Y
		Nitrobenzene-d5	25	17.1426	68.57	69	Y
		Terphenyl-d14	25	21.0295	84.12	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP13(1)D	247811	2-Fluorobiphenyl	25	18.9846	75.94	76	Y
		Nitrobenzene-d5	25	16.5818	66.33	66	Y
		Terphenyl-d14	25	22.2412	88.96	89	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP23(1)	247884	2-Fluorobiphenyl	25	17.1729	68.69	69	Y
		Nitrobenzene-d5	25	15.4839	61.94	62	Y
		Terphenyl-d14	25	17.8622	71.45	71	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP24(1)	247884	2-Fluorobiphenyl	25	16.2335	64.93	65	Y
		Nitrobenzene-d5	25	15.4672	61.87	62	Y
		Terphenyl-d14	25	16.0657	64.26	64	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP25(2)	247884	2-Fluorobiphenyl	25	16.8356	67.34	67	Y
		Nitrobenzene-d5	25	15.3927	61.57	62	Y
		Terphenyl-d14	25	17.9642	71.86	72	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP26(2)	247884	2-Fluorobiphenyl	25	20.1911	80.76	81	Y
		Nitrobenzene-d5	25	17.3255	69.30	69	Y
		Terphenyl-d14	25	21.6856	86.74	87	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP27(2)	247884	2-Fluorobiphenyl	25	17.5746	70.30	70	Y
		Nitrobenzene-d5	25	15.785	63.14	63	Y
		Terphenyl-d14	25	17.79	71.16	71	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP28(2)	247884	2-Fluorobiphenyl	25	20.2993	81.20	81	Y
		Nitrobenzene-d5	25	17.7241	70.90	71	Y
		Terphenyl-d14	25	19.9002	79.60	80	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP29(2)	247884	2-Fluorobiphenyl	25	18.0574	72.23	72	Y
		Nitrobenzene-d5	25	16.1266	64.51	65	Y
		Terphenyl-d14	25	18.7523	75.01	75	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF46(2)	247884	2-Fluorobiphenyl	25	18.9699	75.88	76	Y
		Nitrobenzene-d5	25	16.0731	64.29	64	Y
		Terphenyl-d14	25	20.0474	80.19	80	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF47(2)	247884	2-Fluorobiphenyl	25	19.264	77.06	77	Y
		Nitrobenzene-d5	25	18.0967	72.39	72	Y
		Terphenyl-d14	25	20.6366	82.55	83	Y

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 9 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF48(2)	247884	2-Fluorobiphenyl	25	16.7516	67.01	67	Y
		Nitrobenzene-d5	25	13.9967	55.99	56	Y
		Terphenyl-d14	25	18.4338	73.74	74	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF49(2)	247884	2-Fluorobiphenyl	25	19.7616	79.05	79	Y
		Nitrobenzene-d5	25	17.6795	70.72	71	Y
		Terphenyl-d14	25	22.3352	89.34	89	Y
JPM3-ITF-AF51(2)	247884	2-Fluorobiphenyl	25	17.4937	69.97	70	Y
		Nitrobenzene-d5	25	15.688	62.75	63	Y
		Terphenyl-d14	25	18.4301	73.72	74	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF52(2)	247884	2-Fluorobiphenyl	25	17.5959	70.38	70	Y
		Nitrobenzene-d5	25	15.937	63.75	64	Y
		Terphenyl-d14	25	19.4968	77.99	78	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF53(2)	247884	2-Fluorobiphenyl	25	15.816	63.26	63	Y
		Nitrobenzene-d5	25	13.9806	55.92	56	Y
		Terphenyl-d14	25	16.0213	64.09	64	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF54(2)	247884	2-Fluorobiphenyl	25	17.7018	70.81	71	Y
		Nitrobenzene-d5	25	16.1441	64.58	65	Y
		Terphenyl-d14	25	19.3352	77.34	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF55(2)	247884	2-Fluorobiphenyl	25	16.5334	66.13	66	Y
		Nitrobenzene-d5	25	14.6621	58.65	59	Y
		Terphenyl-d14	25	20.1947	80.78	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF67(2)	247954	2-Fluorobiphenyl	25	15.834	63.34	63	Y
		Nitrobenzene-d5	25	14.1153	56.46	56	Y
		Terphenyl-d14	25	15.6815	62.73	63	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF68(2)	247954	2-Fluorobiphenyl	25	14.0275	56.11	56	Y
		Nitrobenzene-d5	25	12.391	49.56	50	Y
		Terphenyl-d14	25	14.2083	56.83	57	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF69(2)	247954	2-Fluorobiphenyl	25	15.5012	62.00	62	Y
		Nitrobenzene-d5	25	13.4449	53.78	54	Y
		Terphenyl-d14	25	16.2737	65.09	65	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF70(2)	247954	2-Fluorobiphenyl	25	12.71	50.84	51	Y
		Nitrobenzene-d5	25	10.5267	42.11	42	Y
		Terphenyl-d14	25	15.3532	61.41	61	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AP32(1)	247954	2-Fluorobiphenyl	25	15.8553	63.42	63	Y
		Nitrobenzene-d5	25	14.2505	57.00	57	Y
		Terphenyl-d14	25	15.4615	61.85	62	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 10 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AP33(1)	247954	2-Fluorobiphenyl	25	15.5566	62.23	62	Y
		Nitrobenzene-d5	25	12.5825	50.33	50	Y
		Terphenyl-d14	25	15.3742	61.50	61	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP34(1)	247954	2-Fluorobiphenyl	25	17.5887	70.35	70	Y
		Nitrobenzene-d5	25	14.7894	59.16	59	Y
		Terphenyl-d14	25	16.527	66.11	66	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP35(1)	247954	2-Fluorobiphenyl	25	12.6694	50.68	51	Y
		Nitrobenzene-d5	25	8.77525	35.10	35	Y
		Terphenyl-d14	25	15.7956	63.18	63	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP34(1)-D	247954	2-Fluorobiphenyl	25	14.2686	57.07	57	Y
		Nitrobenzene-d5	25	12.6225	50.49	50	Y
		Terphenyl-d14	25	17.3919	69.57	70	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF56(2)	247904	2-Fluorobiphenyl	25	19.2292	76.92	77	Y
		Nitrobenzene-d5	25	16.4107	65.64	66	Y
		Terphenyl-d14	25	19.1297	76.52	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF57(2)	247904	2-Fluorobiphenyl	25	15.4299	61.72	62	Y
		Nitrobenzene-d5	25	13.3099	53.24	53	Y
		Terphenyl-d14	25	18.0793	72.32	72	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF58(2)	247904	2-Fluorobiphenyl	25	15.2184	60.87	61	Y
		Nitrobenzene-d5	25	13.6688	54.68	55	Y
		Terphenyl-d14	25	17.7024	70.81	71	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF59(2)	247904	2-Fluorobiphenyl	25	17.4937	69.97	70	Y
		Nitrobenzene-d5	25	15.3182	61.27	61	Y
		Terphenyl-d14	25	18.5574	74.23	74	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF60(2)	247904	2-Fluorobiphenyl	25	16.613	66.45	66	Y
		Nitrobenzene-d5	25	14.3933	57.57	58	Y
		Terphenyl-d14	25	20.3169	81.27	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF62(2)	247904	2-Fluorobiphenyl	25	16.2748	65.10	65	Y
		Nitrobenzene-d5	25	13.5905	54.36	54	Y
		Terphenyl-d14	25	18.0328	72.13	72	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF63(2)	247904	2-Fluorobiphenyl	25	15.3117	61.25	61	Y
		Nitrobenzene-d5	25	13.6225	54.49	54	Y
		Terphenyl-d14	25	18.9431	75.77	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF64(2)	247904	2-Fluorobiphenyl	25	18.1296	72.52	73	Y
		Nitrobenzene-d5	25	13.378	53.51	54	Y
		Terphenyl-d14	25	19.1087	76.43	76	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF65(2)	247904	2-Fluorobiphenyl	25	19.0601	76.24	76	Y
		Nitrobenzene-d5	25	16.0273	64.11	64	Y
		Terphenyl-d14	25	19.8526	79.41	79	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF64(2)	247904	2-Fluorobiphenyl	25	19.5275	78.11	78	Y
		Nitrobenzene-d5	25	15.8895	63.56	64	Y
		Terphenyl-d14	25	20.1295	80.52	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP30(2)	247904	2-Fluorobiphenyl	25	16.9674	67.87	68	Y
		Nitrobenzene-d5	25	14.2704	57.08	57	Y
		Terphenyl-d14	25	19.2926	77.17	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP31(2)	247904	2-Fluorobiphenyl	25	15.78	63.12	63	Y
		Nitrobenzene-d5	25	13.9747	55.90	56	Y
		Terphenyl-d14	25	20.4288	81.72	82	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF58(2)-D	247904	2-Fluorobiphenyl	25	17.7908	71.16	71	Y
		Nitrobenzene-d5	25	15.7935	63.17	63	Y
		Terphenyl-d14	25	19.4298	77.72	78	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF60(2)-D	247904	2-Fluorobiphenyl	25	17.9658	71.86	72	Y
		Nitrobenzene-d5	25	15.4914	61.97	62	Y
		Terphenyl-d14	25	20.4575	81.83	82	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP36(1)	248048	2-Fluorobiphenyl	25	16.6196	66.48	66	Y
		Nitrobenzene-d5	25	14.3434	57.37	57	Y
		Terphenyl-d14	25	21.579	86.32	86	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP37(1)	248048	2-Fluorobiphenyl	25	15.2068	60.83	61	Y
		Nitrobenzene-d5	25	13.1755	52.70	53	Y
		Terphenyl-d14	25	22.2479	88.99	89	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP38(1)	248048	2-Fluorobiphenyl	25	14.945	59.78	60	Y
		Nitrobenzene-d5	25	14.1494	56.60	57	Y
		Terphenyl-d14	25	20.5874	82.35	82	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP71(2)	248048	2-Fluorobiphenyl	25	14.1691	56.68	57	Y
		Nitrobenzene-d5	25	12.096	48.38	48	Y
		Terphenyl-d14	25	20.7911	83.16	83	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF72(2)	248048	2-Fluorobiphenyl	25	13.2211	52.88	53	Y
		Nitrobenzene-d5	25	11.7023	46.81	47	Y
		Terphenyl-d14	25	20.7581	83.03	83	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF73(2)	248048	2-Fluorobiphenyl	25	14.7327	58.93	59	Y
		Nitrobenzene-d5	25	13.4167	53.67	54	Y
		Terphenyl-d14	25	21.5272	86.11	86	Y

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 12 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF74(2)	248048	2-Fluorobiphenyl	25	13.5573	54.23	54	Y
		Nitrobenzene-d5	25	12.2459	48.98	49	Y
		Terphenyl-d14	25	22.5857	90.34	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF75(2)	248048	2-Fluorobiphenyl	25	11.8564	47.43	47	Y
		Nitrobenzene-d5	25	10.0786	40.31	40	Y
		Terphenyl-d14	25	18.6331	74.53	75	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF76(2)	248048	2-Fluorobiphenyl	25	10.3857	41.54	42	Y
		Nitrobenzene-d5	25	9.09051	36.36	36	Y
		Terphenyl-d14	25	15.3283	61.31	61	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF77(2)	248048	2-Fluorobiphenyl	25	13.6519	54.61	55	Y
		Nitrobenzene-d5	25	11.8518	47.41	47	Y
		Terphenyl-d14	25	21.2426	84.97	85	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF78(2)	248048	2-Fluorobiphenyl	25	12.1158	48.46	48	Y
		Nitrobenzene-d5	25	10.9753	43.90	44	Y
		Terphenyl-d14	25	17.3729	69.49	69	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF79(2)	248048	2-Fluorobiphenyl	25	11.9211	47.68	48	Y
		Nitrobenzene-d5	25	10.2729	41.09	41	Y
		Terphenyl-d14	25	19.6711	78.68	79	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF80(2)	248048	2-Fluorobiphenyl	25	12.8626	51.45	51	Y
		Nitrobenzene-d5	25	11.707	46.83	48	Y
		Terphenyl-d14	25	18.4444	73.78	74	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF72(2)-D	248048	2-Fluorobiphenyl	25	10.195	40.78	41	Y
		Nitrobenzene-d5	25	10.4264	41.71	42	Y
		Terphenyl-d14	25	17.9829	71.93	72	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP38(1)-D	248048	2-Fluorobiphenyl	25	13.6019	54.41	54	Y
		Nitrobenzene-d5	25	11.688	46.75	47	Y
		Terphenyl-d14	25	21.4572	85.83	86	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF81(2)	248065	2-Fluorobiphenyl	25	14.2892	57.16	57	Y
		Nitrobenzene-d5	25	12.7184	50.87	51	Y
		Terphenyl-d14	25	21.3001	85.20	85	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF82(2)	248065	2-Fluorobiphenyl	25	17.3486	69.39	69	Y
		Nitrobenzene-d5	25	15.0559	60.22	60	Y
		Terphenyl-d14	25	19.8802	79.52	80	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF83(2)	248065	2-Fluorobiphenyl	25	16.5276	66.11	66	Y
		Nitrobenzene-d5	25	14.0464	56.19	56	Y
		Terphenyl-d14	25	21.808	87.23	87	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF84(2)	248065	2-Fluorobiphenyl	25	16.5892	66.36	66	Y
		Nitrobenzene-d5	25	13.9114	55.65	56	Y
		Terphenyl-d14	25	22.4477	89.79	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP44(1)	248065	2-Fluorobiphenyl	2.5	2.3433	93.73	94	Y
		Nitrobenzene-d5	2.5	1.72756	69.10	69	Y
		Terphenyl-d14	2.5	2.34793	93.92	94	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF83(2)-D	248065	2-Fluorobiphenyl	25	16.6877	66.75	67	Y
		Nitrobenzene-d5	25	12.9767	51.91	52	Y
		Terphenyl-d14	25	22.5115	90.05	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF95(2)	248160	2-Fluorobiphenyl	25	18.859	75.44	75	Y
		Nitrobenzene-d5	25	18.3033	73.21	73	Y
		Terphenyl-d14	25	22.4322	89.73	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF96(2)	248160	2-Fluorobiphenyl	25	15.1637	60.65	61	Y
		Nitrobenzene-d5	25	13.4922	53.97	54	Y
		Terphenyl-d14	25	21.013	84.05	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF97(2)	248160	2-Fluorobiphenyl	25	16.3065	65.23	65	Y
		Nitrobenzene-d5	25	12.9189	51.68	52	Y
		Terphenyl-d14	25	22.3902	89.56	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF98(2)	248160	2-Fluorobiphenyl	25	16.6837	66.73	67	Y
		Nitrobenzene-d5	25	16.9066	67.63	68	Y
		Terphenyl-d14	25	19.9399	79.76	80	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF99(2)	248160	2-Fluorobiphenyl	25	19.1247	76.50	76	Y
		Nitrobenzene-d5	25	19.2629	77.05	77	Y
		Terphenyl-d14	25	22.4359	89.74	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF101(2)	248160	2-Fluorobiphenyl	25	15.5642	62.26	62	Y
		Nitrobenzene-d5	25	14.2809	57.12	57	Y
		Terphenyl-d14	25	19.4793	77.92	78	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF102(2)	248160	2-Fluorobiphenyl	25	15.4125	61.65	62	Y
		Nitrobenzene-d5	25	15.4221	61.69	62	Y
		Terphenyl-d14	25	21.0552	84.22	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF99(2)-D	248160	2-Fluorobiphenyl	25	14.9712	59.88	60	Y
		Nitrobenzene-d5	25	15.6214	62.49	62	Y
		Terphenyl-d14	25	19.3043	77.22	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF103(2)	248182	2-Fluorobiphenyl	25	20.1522	80.61	81	Y
		Nitrobenzene-d5	25	17.991	71.96	72	Y
		Terphenyl-d14	25	24.3607	97.44	97	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF104(2)	248182	2-Fluorobiphenyl	25	18.5117	74.05	74	Y
		Nitrobenzene-d5	25	18.8811	75.52	76	Y
		Terphenyl-d14	25	26.5566	106.23	106	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF105(2)	248182	2-Fluorobiphenyl	25	18.5066	74.03	74	Y
		Nitrobenzene-d5	25	16.4448	65.78	66	Y
		Terphenyl-d14	25	23.948	95.79	96	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF106(2)	248182	2-Fluorobiphenyl	25	16.9349	67.74	68	Y
		Nitrobenzene-d5	25	16.2577	65.03	65	Y
		Terphenyl-d14	25	23.6189	94.48	94	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF107(2)	248182	2-Fluorobiphenyl	25	19.5129	78.05	78	Y
		Nitrobenzene-d5	25	17.7434	70.97	71	Y
		Terphenyl-d14	25	24.9237	99.69	100	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF105(2)-D	248182	2-Fluorobiphenyl	25	17.495	69.98	70	Y
		Nitrobenzene-d5	25	16.4548	65.82	66	Y
		Terphenyl-d14	25	25.5025	102.01	102	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF110(2)	248190	2-Fluorobiphenyl	25	19.8749	79.50	79	Y
		Nitrobenzene-d5	25	19.1986	76.79	77	Y
		Terphenyl-d14	25	23.8089	95.24	95	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF111(2)	248190	2-Fluorobiphenyl	25	18.774	75.10	75	Y
		Nitrobenzene-d5	25	18.1237	72.49	72	Y
		Terphenyl-d14	25	21.5536	86.21	86	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF113(2)	248190	2-Fluorobiphenyl	25	20.8573	83.43	83	Y
		Nitrobenzene-d5	25	20.2383	80.95	81	Y
		Terphenyl-d14	25	24.145	96.58	97	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF114(2)	248190	2-Fluorobiphenyl	25	20.8422	83.37	83	Y
		Nitrobenzene-d5	25	19.2529	77.01	77	Y
		Terphenyl-d14	25	23.9337	95.73	96	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF115(2)	248190	2-Fluorobiphenyl	25	21.1677	84.67	85	Y
		Nitrobenzene-d5	25	19.9093	79.64	80	Y
		Terphenyl-d14	25	28.7714	115.09	115	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF113(2)-D	248190	2-Fluorobiphenyl	25	18.9569	75.83	76	Y
		Nitrobenzene-d5	25	19.0141	76.06	76	Y
		Terphenyl-d14	25	25.7843	103.14	103	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP50(1)	248208	2-Fluorobiphenyl	25	17.9596	71.84	72	Y
		Nitrobenzene-d5	25	15.3895	61.56	62	Y
		Terphenyl-d14	25	21.304	85.22	85	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 15 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AP51(1)	248208	2-Fluorobiphenyl	25	18.2014	72.81	73	Y
		Nitrobenzene-d5	25	17.9087	71.63	72	Y
		Terphenyl-d14	25	21.1092	84.44	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP54(1)	248208	2-Fluorobiphenyl	25	18.9269	75.71	76	Y
		Nitrobenzene-d5	25	17.6505	70.60	71	Y
		Terphenyl-d14	25	21.3129	85.25	85	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP55(1)	248208	2-Fluorobiphenyl	2.5	2.83706	113.48	113	Y
		Nitrobenzene-d5	2.5	1.75458	70.18	70	Y
		Terphenyl-d14	2.5	2.41352	96.54	97	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP56(1)	248208	2-Fluorobiphenyl	2.5	1.53498	61.40	61	Y
		Nitrobenzene-d5	2.5	1.05032	42.01	42	Y
		Terphenyl-d14	2.5	1.54893	61.96	62	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP55(1)-D	248208	2-Fluorobiphenyl	2.5	1.77595	71.04	71	Y
		Nitrobenzene-d5	2.5	1.01233	40.49	40	Y
		Terphenyl-d14	2.5	2.09582	83.83	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF116(2)	248233	2-Fluorobiphenyl	25	21.3294	85.32	85	Y
		Nitrobenzene-d5	25	21.1984	84.79	85	Y
		Terphenyl-d14	25	23.5085	94.03	94	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF117(2)	248233	2-Fluorobiphenyl	25	18.446	73.78	74	Y
		Nitrobenzene-d5	25	18.6398	74.56	75	Y
		Terphenyl-d14	25	21.5553	86.22	86	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF118(2)	248233	2-Fluorobiphenyl	25	19.6333	78.53	79	Y
		Nitrobenzene-d5	25	20.0727	80.29	80	Y
		Terphenyl-d14	25	22.5561	90.22	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF119(2)	248233	2-Fluorobiphenyl	25	20.7907	83.16	83	Y
		Nitrobenzene-d5	25	20.3062	81.22	81	Y
		Terphenyl-d14	25	28.0864	112.35	112	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF121(2)	248233	2-Fluorobiphenyl	25	18.8946	75.58	76	Y
		Nitrobenzene-d5	25	18.4384	73.75	74	Y
		Terphenyl-d14	25	22.2828	89.13	89	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF122(2)	248233	2-Fluorobiphenyl	25	18.9933	75.97	76	Y
		Nitrobenzene-d5	25	18.3657	73.46	73	Y
		Terphenyl-d14	25	21.9845	87.94	88	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF123(2)	248233	2-Fluorobiphenyl	25	15.8134	63.25	63	Y
		Nitrobenzene-d5	25	15.1166	60.47	60	Y
		Terphenyl-d14	25	24.464	97.86	98	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF124(2)	248233	2-Fluorobiphenyl	25	19.8613	79.45	79	Y
		Nitrobenzene-d5	25	19.4419	77.77	78	Y
		Terphenyl-d14	25	22.6279	90.51	91	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP57(1)	248233	2-Fluorobiphenyl	25	19.5579	78.23	78	Y
		Nitrobenzene-d5	25	16.9136	67.65	68	Y
		Terphenyl-d14	25	22.4136	89.65	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF119(2)-D	248233	2-Fluorobiphenyl	25	19.4002	77.60	78	Y
		Nitrobenzene-d5	25	19.4274	77.71	78	Y
		Terphenyl-d14	25	27.134	108.54	109	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP60(1)	248248	2-Fluorobiphenyl	25	19.9913	79.97	80	Y
		Nitrobenzene-d5	25	18.9053	75.62	76	Y
		Terphenyl-d14	25	21.8121	87.25	87	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP61(1)	248248	2-Fluorobiphenyl	25	17.7606	71.04	71	Y
		Nitrobenzene-d5	25	16.5158	66.06	66	Y
		Terphenyl-d14	25	22.7929	91.17	91	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP63(1)	248248	2-Fluorobiphenyl	25	18.1243	72.50	72	Y
		Nitrobenzene-d5	25	17.5634	70.25	70	Y
		Terphenyl-d14	25	20.7704	83.08	83	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF125(2)	248271	2-Fluorobiphenyl	25	12.63	50.52	51	Y
		Nitrobenzene-d5	25	11.8253	47.30	47	Y
		Terphenyl-d14	25	17.6632	70.65	71	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF126(2)	248271	2-Fluorobiphenyl	25	18.522	74.09	74	Y
		Nitrobenzene-d5	25	17.7559	71.02	71	Y
		Terphenyl-d14	25	25.6884	102.75	103	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF127(2)	248271	2-Fluorobiphenyl	25	19.3564	77.43	77	Y
		Nitrobenzene-d5	25	18.7577	75.03	75	Y
		Terphenyl-d14	25	22.8299	91.32	91	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF128(2)	248271	2-Fluorobiphenyl	25	18.7886	75.15	75	Y
		Nitrobenzene-d5	25	18.132	72.53	73	Y
		Terphenyl-d14	25	28.2987	113.19	113	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF129(2)	248271	2-Fluorobiphenyl	25	20.7972	83.19	83	Y
		Nitrobenzene-d5	25	20.6688	82.68	83	Y
		Terphenyl-d14	25	26.1042	104.42	104	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF130(2)	248271	2-Fluorobiphenyl	25	16.7359	66.94	67	Y
		Nitrobenzene-d5	25	17.0044	68.02	68	Y
		Terphenyl-d14	25	20.7051	82.82	83	Y

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF131(2)	248271	2-Fluorobiphenyl	25	19.6005	78.40	78	Y
		Nitrobenzene-d5	25	19.4773	77.91	78	Y
		Terphenyl-d14	25	24.7352	98.94	99	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF132(2)	248271	2-Fluorobiphenyl	25	19.4643	77.86	78	Y
		Nitrobenzene-d5	25	18.3372	73.35	73	Y
		Terphenyl-d14	25	21.1644	84.66	85	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF133(2)	248271	2-Fluorobiphenyl	25	21.6076	86.43	86	Y
		Nitrobenzene-d5	25	19.9127	79.65	80	Y
		Terphenyl-d14	25	24.4116	97.65	98	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF130(2)-D	248271	2-Fluorobiphenyl	25	15.5004	62.00	62	Y
		Nitrobenzene-d5	25	15.8557	63.42	63	Y
		Terphenyl-d14	25	19.6796	78.72	79	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP64(1)	248289	2-Fluorobiphenyl	25	18.473	73.89	74	Y
		Nitrobenzene-d5	25	17.5836	70.33	70	Y
		Terphenyl-d14	25	24.8167	99.27	99	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP65(1)	248289	2-Fluorobiphenyl	25	19.8554	79.42	79	Y
		Nitrobenzene-d5	25	19.291	77.16	77	Y
		Terphenyl-d14	25	24.2424	96.97	97	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP66(1)	248289	2-Fluorobiphenyl	25	18.0101	72.04	72	Y
		Nitrobenzene-d5	25	17.5709	70.28	70	Y
		Terphenyl-d14	25	23.9161	95.66	96	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF134(2)	248289	2-Fluorobiphenyl	25	18.3093	73.24	73	Y
		Nitrobenzene-d5	25	16.3549	65.42	65	Y
		Terphenyl-d14	25	24.1615	96.65	97	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF135(2)	248289	2-Fluorobiphenyl	25	20.418	81.67	82	Y
		Nitrobenzene-d5	25	18.7473	74.99	75	Y
		Terphenyl-d14	25	28.9675	115.87	116	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF136(2)	248289	2-Fluorobiphenyl	25	13.9699	55.88	56	Y
		Nitrobenzene-d5	25	13.8344	55.34	55	Y
		Terphenyl-d14	25	16.4311	65.72	66	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP67(1)	248301	2-Fluorobiphenyl	25	20.9073	83.63	84	Y
		Nitrobenzene-d5	25	18.554	74.22	74	Y
		Terphenyl-d14	25	24.9171	99.67	100	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP68(1)	248301	2-Fluorobiphenyl	25	20.2163	80.87	81	Y
		Nitrobenzene-d5	25	16.8513	67.41	67	Y
		Terphenyl-d14	25	22.3941	89.58	90	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AP69(1)	248301	2-Fluorobiphenyl	25	18.7168	74.87	75	Y
		Nitrobenzene-d5	25	15.5281	62.11	62	Y
		Terphenyl-d14	25	22.9735	91.89	92	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AP70(1)	248301	2-Fluorobiphenyl	25	22.7088	90.84	91	Y
		Nitrobenzene-d5	25	17.0775	68.31	68	Y
		Terphenyl-d14	25	26.1859	104.74	105	Y
JPM3-ITF-AF137(2)	248301	2-Fluorobiphenyl	25	15.8476	63.39	63	Y
		Nitrobenzene-d5	25	13.8168	55.27	55	Y
		Terphenyl-d14	25	21.1224	84.49	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF138(2)	248301	2-Fluorobiphenyl	25	19.249	77.00	77	Y
		Nitrobenzene-d5	25	16.3193	65.28	65	Y
		Terphenyl-d14	25	20.254	81.02	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF139(2)	248301	2-Fluorobiphenyl	25	19.2507	77.00	77	Y
		Nitrobenzene-d5	25	16.8001	67.20	67	Y
		Terphenyl-d14	25	20.9827	83.93	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF140(2)	248301	2-Fluorobiphenyl	25	17.612	70.45	70	Y
		Nitrobenzene-d5	25	14.7053	58.82	59	Y
		Terphenyl-d14	25	20.693	82.77	83	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF141(2)	248301	2-Fluorobiphenyl	25	18.2503	73.00	73	Y
		Nitrobenzene-d5	25	16.4972	65.99	66	Y
		Terphenyl-d14	25	20.2793	81.12	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF142(2)	248301	2-Fluorobiphenyl	25	15.9288	63.72	64	Y
		Nitrobenzene-d5	25	13.7829	55.13	55	Y
		Terphenyl-d14	25	20.1874	80.75	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AP70(1)-D	248301	2-Fluorobiphenyl	25	15.9139	63.66	64	Y
		Nitrobenzene-d5	25	13.0225	52.09	52	Y
		Terphenyl-d14	25	18.8369	75.35	75	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF143(2)	248327	2-Fluorobiphenyl	25	13.8078	55.23	55	Y
		Nitrobenzene-d5	25	12.589	50.36	50	Y
		Terphenyl-d14	25	18.1085	72.43	72	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF144(2)	248327	2-Fluorobiphenyl	25	15.7571	63.03	63	Y
		Nitrobenzene-d5	25	14.8144	59.26	59	Y
		Terphenyl-d14	25	21.8548	87.42	87	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF145(2)	248327	2-Fluorobiphenyl	25	18.144	72.58	73	Y
		Nitrobenzene-d5	25	14.2082	56.83	57	Y
		Terphenyl-d14	25	21.8441	87.38	87	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF146(2)	248327	2-Fluorobiphenyl	25	20.7138	82.86	83	Y
		Nitrobenzene-d5	25	16.0984	64.39	64	Y
		Terphenyl-d14	25	26.228	104.91	105	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF147(2)	248327	2-Fluorobiphenyl	25	22.4822	89.93	90	Y
		Nitrobenzene-d5	25	19.4618	77.85	78	Y
		Terphenyl-d14	25	23.66	94.64	95	Y
JPM3-ITF-AF148(2)	248327	2-Fluorobiphenyl	25	18.1847	72.74	73	Y
		Nitrobenzene-d5	25	15.057	60.23	60	Y
		Terphenyl-d14	25	22.6746	90.70	91	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AP71(1)	248327	2-Fluorobiphenyl	25	19.3288	77.32	77	Y
		Nitrobenzene-d5	25	17.1088	68.44	68	Y
		Terphenyl-d14	25	22.5492	90.20	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AP72(1)	248327	2-Fluorobiphenyl	25	22.2111	88.84	89	Y
		Nitrobenzene-d5	25	16.2775	65.11	65	Y
		Terphenyl-d14	25	30.8437	123.37	123	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF145(2)-D	248327	2-Fluorobiphenyl	25	19.8638	79.46	79	Y
		Nitrobenzene-d5	25	16.7191	66.88	67	Y
		Terphenyl-d14	25	24.6329	98.53	99	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF156(2)	248423	2-Fluorobiphenyl	25	16.0702	64.28	64	Y
		Nitrobenzene-d5	25	13.9505	55.80	56	Y
		Terphenyl-d14	25	18.7647	75.06	75	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF157(2)	248423	2-Fluorobiphenyl	25	15.7458	62.98	63	Y
		Nitrobenzene-d5	25	14.3299	57.32	57	Y
		Terphenyl-d14	25	19.1684	76.67	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF158(2)	248423	2-Fluorobiphenyl	25	17.1809	68.72	69	Y
		Nitrobenzene-d5	25	15.4897	61.96	62	Y
		Terphenyl-d14	25	18.9572	75.83	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF159(2)	248423	2-Fluorobiphenyl	25	17.5945	70.38	70	Y
		Nitrobenzene-d5	25	15.9624	63.85	64	Y
		Terphenyl-d14	25	18.8395	75.36	75	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF160(2)	248423	2-Fluorobiphenyl	25	18.988	75.95	76	Y
		Nitrobenzene-d5	25	17.924	71.70	72	Y
		Terphenyl-d14	25	19.6879	78.75	79	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPM3-ITF-AF161(2)	248423	2-Fluorobiphenyl	25	20.3931	81.57	82	Y
		Nitrobenzene-d5	25	18.8234	75.29	75	Y
		Terphenyl-d14	25	24.2243	96.90	97	Y

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF162(2)	248423	2-Fluorobiphenyl	25	20.4465	81.79	82	Y
		Nitrobenzene-d5	25	19.7471	78.99	79	Y
		Terphenyl-d14	25	23.7758	95.10	95	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF163(2)	248423	2-Fluorobiphenyl	25	16.139	64.56	65	Y
		Nitrobenzene-d5	25	14.8474	59.39	59	Y
		Terphenyl-d14	25	18.7887	75.15	75	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF164(2)	248423	2-Fluorobiphenyl	25	16.7028	66.81	67	Y
		Nitrobenzene-d5	25	15.2966	61.19	61	Y
		Terphenyl-d14	25	18.7056	74.82	75	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF165(2)	248423	2-Fluorobiphenyl	25	19.1185	76.47	76	Y
		Nitrobenzene-d5	25	17.6221	70.49	70	Y
		Terphenyl-d14	25	20.8517	83.41	83	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF166(2)	248423	2-Fluorobiphenyl	25	15.4997	62.00	62	Y
		Nitrobenzene-d5	25	14.5647	58.26	58	Y
		Terphenyl-d14	25	16.6865	66.75	67	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF161(2)-D	248423	2-Fluorobiphenyl	25	19.6484	78.59	79	Y
		Nitrobenzene-d5	25	17.7639	71.06	71	Y
		Terphenyl-d14	25	21.0942	84.38	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF167(2)	248439	2-Fluorobiphenyl	25	17.4397	69.76	70	Y
		Nitrobenzene-d5	25	15.5679	62.27	62	Y
		Terphenyl-d14	25	19.8581	79.43	79	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP77(1)	248537	2-Fluorobiphenyl	25	17.9803	71.92	72	Y
		Nitrobenzene-d5	25	16.635	66.54	67	Y
		Terphenyl-d14	25	19.5092	78.04	78	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP78(1)	248537	2-Fluorobiphenyl	25	13.5248	54.10	54	Y
		Nitrobenzene-d5	25	12.1105	48.44	48	Y
		Terphenyl-d14	25	15.3221	61.29	61	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF168(2)	248537	2-Fluorobiphenyl	2.5	2.21532	88.61	89	Y
		Nitrobenzene-d5	2.5	1.98573	79.43	79	Y
		Terphenyl-d14	2.5	2.8881	115.52	116	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF171	248926	2-Fluorobiphenyl	25	15.1745	60.70	61	Y
		Nitrobenzene-d5	25	9.88989	39.56	40	Y
		Terphenyl-d14	25	17.0383	68.15	68	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF173	248926	2-Fluorobiphenyl	25	14.4805	57.92	58	Y
		Nitrobenzene-d5	25	15.3955	61.58	62	Y
		Terphenyl-d14	25	20.1578	80.63	81	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF175	248926	2-Fluorobiphenyl	25	11.9757	47.90	48	Y
		Nitrobenzene-d5	25	10.765	43.06	43	Y
		Terphenyl-d14	25	16.7098	66.84	67	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP80	248926	2-Fluorobiphenyl	25	13.8397	55.36	55	Y
		Nitrobenzene-d5	25	12.6601	50.64	51	Y
		Terphenyl-d14	25	18.9425	75.77	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF169	248926	2-Fluorobiphenyl	25	8.0698	32.28	32	Y
		Nitrobenzene-d5	25	16.3878	65.55	66	Y
		Terphenyl-d14	25	17.5768	70.31	70	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF170	248926	2-Fluorobiphenyl	25	14.1986	56.79	57	Y
		Nitrobenzene-d5	25	13.4907	53.96	54	Y
		Terphenyl-d14	25	18.4422	73.77	74	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF172	248926	2-Fluorobiphenyl	25	12.4895	49.96	50	Y
		Nitrobenzene-d5	25	11.357	45.43	45	Y
		Terphenyl-d14	25	20.1858	80.74	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF176	248926	2-Fluorobiphenyl	25	11.0035	44.01	44	Y
		Nitrobenzene-d5	25	10.7146	42.86	43	Y
		Terphenyl-d14	25	14.9247	59.70	60	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF177	248926	2-Fluorobiphenyl	25	14.8865	59.55	60	Y
		Nitrobenzene-d5	25	14.5703	58.28	58	Y
		Terphenyl-d14	25	21.072	84.29	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF178	248926	2-Fluorobiphenyl	25	11.342	45.37	45	Y
		Nitrobenzene-d5	25	10.4753	41.90	42	Y
		Terphenyl-d14	25	19.4665	77.87	78	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF179	248926	2-Fluorobiphenyl	25	12.6156	50.46	50	Y
		Nitrobenzene-d5	25	24.6396	98.56	99	Y
		Terphenyl-d14	25	20.5044	82.02	82	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF180(2)	248981	2-Fluorobiphenyl	25	18.7587	75.03	75	Y
		Nitrobenzene-d5	25	15.3268	61.31	61	Y
		Terphenyl-d14	25	21.1646	84.66	85	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF181(2)	248981	2-Fluorobiphenyl	25	19.5495	78.20	78	Y
		Nitrobenzene-d5	25	15.8294	63.32	63	Y
		Terphenyl-d14	25	20.8789	83.52	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF182(2)	248981	2-Fluorobiphenyl	25	19.3273	77.31	77	Y
		Nitrobenzene-d5	25	15.3926	61.57	62	Y
		Terphenyl-d14	25	20.5597	82.24	82	Y

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF183(2)	248981	2-Fluorobiphenyl	25	20.6843	82.74	83	Y
		Nitrobenzene-d5	25	16.4127	65.65	66	Y
		Terphenyl-d14	25	23.7147	94.86	95	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF184(2)	248981	2-Fluorobiphenyl	25	16.517	66.07	66	Y
		Nitrobenzene-d5	25	14.0666	56.27	56	Y
		Terphenyl-d14	25	20.1031	80.41	80	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF185(2)	248981	2-Fluorobiphenyl	25	13.83	55.32	55	Y
		Nitrobenzene-d5	25	11.5966	46.39	46	Y
		Terphenyl-d14	25	18.4747	73.90	74	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF186(2)	248981	2-Fluorobiphenyl	25	16.0359	64.14	64	Y
		Nitrobenzene-d5	25	13.2975	53.19	53	Y
		Terphenyl-d14	25	20.2873	81.15	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF187(2)	248981	2-Fluorobiphenyl	25	16.6162	66.46	66	Y
		Nitrobenzene-d5	25	13.6127	54.45	54	Y
		Terphenyl-d14	25	19.7847	79.14	79	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF188(2)	248981	2-Fluorobiphenyl	25	16.8811	67.52	68	Y
		Nitrobenzene-d5	25	14.4219	57.69	58	Y
		Terphenyl-d14	25	19.3324	77.33	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF189(2)	248981	2-Fluorobiphenyl	25	15.5307	62.12	62	Y
		Nitrobenzene-d5	25	12.2064	48.83	49	Y
		Terphenyl-d14	25	18.3148	73.26	73	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF190(2)	248981	2-Fluorobiphenyl	25	15.596	62.38	62	Y
		Nitrobenzene-d5	25	12.3274	49.31	49	Y
		Terphenyl-d14	25	17.7849	71.14	71	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF191(2)	248981	2-Fluorobiphenyl	25	14.3729	57.49	57	Y
		Nitrobenzene-d5	25	11.5848	46.34	46	Y
		Terphenyl-d14	25	17.2626	69.05	69	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP81(1)	248981	2-Fluorobiphenyl	25	17.216	68.86	69	Y
		Nitrobenzene-d5	25	12.7076	50.83	51	Y
		Terphenyl-d14	25	21.0144	84.06	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP82(1)	248981	2-Fluorobiphenyl	25	17.4238	69.70	70	Y
		Nitrobenzene-d5	25	13.0317	52.13	52	Y
		Terphenyl-d14	25	19.1388	76.56	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP83(1)	248981	2-Fluorobiphenyl	25	16.7517	67.01	67	Y
		Nitrobenzene-d5	25	12.4841	49.94	50	Y
		Terphenyl-d14	25	20.5241	82.10	82	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 23 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF186(2)-D	248981	2-Fluorobiphenyl	25	16.4435	65.77	66	Y
		Nitrobenzene-d5	25	12.4821	49.93	50	Y
		Terphenyl-d14	25	20.9747	83.90	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF192(2)	249025	2-Fluorobiphenyl	25	15.0586	60.23	60	Y
		Nitrobenzene-d5	25	11.9405	47.76	48	Y
		Terphenyl-d14	25	17.74	70.96	71	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF193(2)	249025	2-Fluorobiphenyl	25	15.7769	63.11	63	Y
		Nitrobenzene-d5	25	13.1344	52.54	53	Y
		Terphenyl-d14	25	18.9255	75.70	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF194(2)	249025	2-Fluorobiphenyl	25	15.6059	62.42	62	Y
		Nitrobenzene-d5	25	13.1566	52.63	53	Y
		Terphenyl-d14	25	19.6671	78.67	79	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF195(2)	249025	2-Fluorobiphenyl	25	16.0967	64.39	64	Y
		Nitrobenzene-d5	25	13.0765	52.31	52	Y
		Terphenyl-d14	25	17.5206	70.08	70	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF196(2)	249025	2-Fluorobiphenyl	25	14.7662	59.06	59	Y
		Nitrobenzene-d5	25	11.67	46.68	47	Y
		Terphenyl-d14	25	18.9185	75.67	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF197(2)	249025	2-Fluorobiphenyl	25	16.9496	67.80	68	Y
		Nitrobenzene-d5	25	13.7251	54.90	55	Y
		Terphenyl-d14	25	18.049	72.20	72	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF198(2)	249025	2-Fluorobiphenyl	25	15.0156	60.06	60	Y
		Nitrobenzene-d5	25	12.612	50.45	50	Y
		Terphenyl-d14	25	19.107	76.43	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF199(2)	249025	2-Fluorobiphenyl	25	15.6137	62.45	62	Y
		Nitrobenzene-d5	25	12.8159	51.26	51	Y
		Terphenyl-d14	25	19.0457	76.18	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF200(2)	249025	2-Fluorobiphenyl	25	15.8872	63.55	64	Y
		Nitrobenzene-d5	25	12.1942	48.78	49	Y
		Terphenyl-d14	25	19.2347	76.94	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF201(2)	249025	2-Fluorobiphenyl	25	15.2846	61.14	61	Y
		Nitrobenzene-d5	25	12.2179	48.87	49	Y
		Terphenyl-d14	25	16.9426	67.77	68	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF202(2)	249025	2-Fluorobiphenyl	25	9.1789	36.72	37	Y
		Nitrobenzene-d5	25	7.29223	29.17	29	Y
		Terphenyl-d14	25	11.3997	45.60	46	Y

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 24 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AP85(2)	249025	2-Fluorobiphenyl	25	16.4311	65.72	66	Y
		Nitrobenzene-d5	25	12.4726	49.89	50	Y
		Terphenyl-d14	25	18.6078	74.43	74	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF195(2)-D	249025	2-Fluorobiphenyl	25	14.6698	58.68	59	Y
		Nitrobenzene-d5	25	10.9386	43.75	44	Y
		Terphenyl-d14	25	16.4905	65.96	66	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF204(2)	249072	2-Fluorobiphenyl	25	17.7441	70.98	71	Y
		Nitrobenzene-d5	25	14.6576	58.63	59	Y
		Terphenyl-d14	25	17.0627	68.25	68	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF205(2)	249072	2-Fluorobiphenyl	25	17.6721	70.69	71	Y
		Nitrobenzene-d5	25	14.4364	57.75	58	Y
		Terphenyl-d14	25	16.6771	66.71	67	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF206(2)	249072	2-Fluorobiphenyl	25	15.8261	63.30	63	Y
		Nitrobenzene-d5	25	13.551	54.20	54	Y
		Terphenyl-d14	25	15.9707	63.88	64	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF207(2)	249072	2-Fluorobiphenyl	25	16.4428	65.77	66	Y
		Nitrobenzene-d5	25	13.7243	54.90	55	Y
		Terphenyl-d14	25	17.2956	69.18	69	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF208(2)	249072	2-Fluorobiphenyl	25	15.9838	63.94	64	Y
		Nitrobenzene-d5	25	13.8308	55.32	55	Y
		Terphenyl-d14	25	15.7139	62.86	63	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF209(2)	249072	2-Fluorobiphenyl	25	15.9032	63.61	64	Y
		Nitrobenzene-d5	25	13.5038	54.02	54	Y
		Terphenyl-d14	25	16.7135	66.85	67	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF211(2)	249072	2-Fluorobiphenyl	25	17.5509	70.20	70	Y
		Nitrobenzene-d5	25	14.3957	57.58	58	Y
		Terphenyl-d14	25	17.837	71.35	71	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP86(1)	249072	2-Fluorobiphenyl	25	16.743	66.97	67	Y
		Nitrobenzene-d5	25	13.9691	55.88	56	Y
		Terphenyl-d14	25	16.1855	64.74	65	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP87(1)	249072	2-Fluorobiphenyl	25	13.9864	55.95	56	Y
		Nitrobenzene-d5	25	11.3393	45.36	45	Y
		Terphenyl-d14	25	15.5681	62.27	62	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP88(1)	249072	2-Fluorobiphenyl	25	15.0501	60.20	60	Y
		Nitrobenzene-d5	25	12.6081	50.43	50	Y
		Terphenyl-d14	25	15.3972	61.59	62	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 25 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AP89(1)	249072	2-Fluorobiphenyl	25	14.6857	58.74	59	Y
		Nitrobenzene-d5	25	12.372	49.49	49	Y
		Terphenyl-d14	25	15.6288	62.52	63	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF204(2)-D	249072	2-Fluorobiphenyl	25	16.7323	66.93	67	Y
		Nitrobenzene-d5	25	14.1665	56.67	57	Y
		Terphenyl-d14	25	16.9961	67.98	68	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF213(2)	249177	2-Fluorobiphenyl	25	15.1978	60.79	61	Y
		Nitrobenzene-d5	25	13.9029	55.61	56	Y
		Terphenyl-d14	25	17.5397	70.16	70	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF214(2)	249177	2-Fluorobiphenyl	25	16.2315	64.93	65	Y
		Nitrobenzene-d5	25	15.4964	61.99	62	Y
		Terphenyl-d14	25	19.1854	76.74	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF215(2)	249177	2-Fluorobiphenyl	25	14.8035	59.21	59	Y
		Nitrobenzene-d5	25	14.9313	59.73	60	Y
		Terphenyl-d14	25	19.2267	76.91	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF216(2)	249177	2-Fluorobiphenyl	25	15.9544	63.82	64	Y
		Nitrobenzene-d5	25	15.8881	63.55	64	Y
		Terphenyl-d14	25	20.6958	82.78	83	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF217(2)	249177	2-Fluorobiphenyl	25	14.2369	56.95	57	Y
		Nitrobenzene-d5	25	13.8781	55.51	56	Y
		Terphenyl-d14	25	20.0154	80.06	80	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF218(2)	249177	2-Fluorobiphenyl	25	11.6873	46.75	47	Y
		Nitrobenzene-d5	25	9.63859	38.55	39	Y
		Terphenyl-d14	25	16.5001	66.00	66	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF219(2)	249177	2-Fluorobiphenyl	25	13.902	55.61	56	Y
		Nitrobenzene-d5	25	13.4422	53.77	54	Y
		Terphenyl-d14	25	18.8229	75.29	75	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF220(2)	249177	2-Fluorobiphenyl	25	17.343	69.37	69	Y
		Nitrobenzene-d5	25	17.1494	68.60	69	Y
		Terphenyl-d14	25	20.2635	81.05	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF221(2)	249177	2-Fluorobiphenyl	25	16.8097	67.24	67	Y
		Nitrobenzene-d5	25	16.1922	64.77	65	Y
		Terphenyl-d14	25	20.6133	82.45	82	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP90(1)	249177	2-Fluorobiphenyl	25	18.0651	72.26	72	Y
		Nitrobenzene-d5	25	17.0709	68.28	68	Y
		Terphenyl-d14	25	21.5934	86.37	86	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 26 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AP91(1)	249177	2-Fluorobiphenyl	25	15.3594	61.44	61	Y
		Nitrobenzene-d5	25	13.4079	53.63	54	Y
		Terphenyl-d14	25	20.662	82.65	83	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF221(2)-D	249177	2-Fluorobiphenyl	25	16.9439	67.78	68	Y
		Nitrobenzene-d5	25	15.7823	63.13	63	Y
		Terphenyl-d14	25	20.3597	81.44	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-1(1)	249398	2-Fluorobiphenyl	25	19.79	79.16	79	Y
		Nitrobenzene-d5	25	19.683	78.73	79	Y
		Terphenyl-d14	25	23.8585	95.43	95	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-2(1)	249398	2-Fluorobiphenyl	25	17.0282	68.11	68	Y
		Nitrobenzene-d5	25	16.3609	65.44	65	Y
		Terphenyl-d14	25	23.6918	94.77	95	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-3(1)	249398	2-Fluorobiphenyl	25	20.8308	83.32	83	Y
		Nitrobenzene-d5	25	20.379	81.52	82	Y
		Terphenyl-d14	25	26.219	104.88	105	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-4(1)	249398	2-Fluorobiphenyl	25	17.0704	68.28	68	Y
		Nitrobenzene-d5	25	16.6762	66.70	67	Y
		Terphenyl-d14	25	21.5639	86.26	86	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-5(1)	249398	2-Fluorobiphenyl	25	22.4503	89.80	90	Y
		Nitrobenzene-d5	25	22.1712	88.68	89	Y
		Terphenyl-d14	25	28.0233	112.09	112	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-6(1)	249398	2-Fluorobiphenyl	25	21.278	85.11	85	Y
		Nitrobenzene-d5	25	20.8158	83.26	83	Y
		Terphenyl-d14	25	23.3501	93.40	93	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-7(1)	249398	2-Fluorobiphenyl	25	19.1509	76.60	77	Y
		Nitrobenzene-d5	25	17.5667	70.27	70	Y
		Terphenyl-d14	25	25.5997	102.40	102	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-8(1)	249398	2-Fluorobiphenyl	25	22.8407	91.36	91	Y
		Nitrobenzene-d5	25	22.0153	88.06	88	Y
		Terphenyl-d14	25	24.7465	98.99	99	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-9(1)	249398	2-Fluorobiphenyl	25	20.7014	82.81	83	Y
		Nitrobenzene-d5	25	19.5357	78.14	78	Y
		Terphenyl-d14	25	25.4806	101.92	102	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3ITFCP1-10(1)	249398	2-Fluorobiphenyl	25	22.4315	89.73	90	Y
		Nitrobenzene-d5	25	21.5306	86.12	86	Y
		Terphenyl-d14	25	26.0172	104.07	104	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-11(1)	249398	2-Fluorobiphenyl	25	22.189	88.76	89	Y
		Nitrobenzene-d5	25	21.7284	86.91	87	Y
		Terphenyl-d14	25	29.4871	117.95	118	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-12(1)	249398	2-Fluorobiphenyl	25	21.0162	84.06	84	Y
		Nitrobenzene-d5	25	19.6091	78.44	78	Y
		Terphenyl-d14	25	27.2678	109.07	109	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-13(1)	249398	2-Fluorobiphenyl	25	20.9879	83.95	84	Y
		Nitrobenzene-d5	25	20.4049	81.62	82	Y
		Terphenyl-d14	25	26.4339	105.74	106	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-14(1)	249398	2-Fluorobiphenyl	25	20.5648	82.26	82	Y
		Nitrobenzene-d5	25	19.7113	78.85	79	Y
		Terphenyl-d14	25	26.6851	106.74	107	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-15(1)	249398	2-Fluorobiphenyl	25	18.235	72.94	73	Y
		Nitrobenzene-d5	25	18.238	72.95	73	Y
		Terphenyl-d14	25	23.5539	94.22	95	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-16(1)	249398	2-Fluorobiphenyl	25	20.0264	80.11	80	Y
		Nitrobenzene-d5	25	19.0092	76.04	76	Y
		Terphenyl-d14	25	27.7779	111.11	111	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-17(1)	249398	2-Fluorobiphenyl	25	20.9996	84.00	84	Y
		Nitrobenzene-d5	25	20.7516	83.01	83	Y
		Terphenyl-d14	25	28.0274	112.11	112	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-18(1)	249398	2-Fluorobiphenyl	25	17.4374	69.75	70	Y
		Nitrobenzene-d5	25	15.5692	62.28	62	Y
		Terphenyl-d14	25	31.4402	125.76	126	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-19(1)	249398	2-Fluorobiphenyl	25	16.1056	64.42	64	Y
		Nitrobenzene-d5	25	15.3792	61.52	64	Y
		Terphenyl-d14	25	21.8184	87.27	87	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-20(1)	249398	2-Fluorobiphenyl	25	18.9409	75.76	76	Y
		Nitrobenzene-d5	25	18.576	74.30	74	Y
		Terphenyl-d14	25	23.1872	92.75	93	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3ITFCP1-21(1)	249398	2-Fluorobiphenyl	25	18.6043	74.42	74	Y
		Nitrobenzene-d5	25	17.1954	68.78	69	Y
		Terphenyl-d14	25	26.5253	106.10	106	Y

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF235(2)	249439	2-Fluorobiphenyl	25	16.2374	64.95	65	Y
		Nitrobenzene-d5	25	16.8902	67.56	68	Y
		Terphenyl-d14	25	21.593	86.37	86	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF236(2)	249439	2-Fluorobiphenyl	25	21.2126	84.85	85	Y
		Nitrobenzene-d5	25	21.804	87.22	87	Y
		Terphenyl-d14	25	25.0448	100.18	100	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF237(2)	249439	2-Fluorobiphenyl	25	18.8151	75.26	75	Y
		Nitrobenzene-d5	25	19.454	77.82	78	Y
		Terphenyl-d14	25	23.579	94.32	94	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF238(2)	249439	2-Fluorobiphenyl	25	18.9269	75.71	76	Y
		Nitrobenzene-d5	25	18.7298	74.92	75	Y
		Terphenyl-d14	25	22.4769	89.91	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF239(2)	249439	2-Fluorobiphenyl	25	19.6412	78.56	79	Y
		Nitrobenzene-d5	25	20.2919	81.17	81	Y
		Terphenyl-d14	25	25.045	100.18	100	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF240(2)	249439	2-Fluorobiphenyl	25	20.0799	80.32	80	Y
		Nitrobenzene-d5	25	20.9228	83.69	84	Y
		Terphenyl-d14	25	24.664	98.66	99	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF241(2)	249439	2-Fluorobiphenyl	25	20.319	81.28	81	Y
		Nitrobenzene-d5	25	21.3939	85.58	86	Y
		Terphenyl-d14	25	26.2607	105.04	105	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF222(2)	249240	2-Fluorobiphenyl	25	15.7188	62.88	63	Y
		Nitrobenzene-d5	25	15.4905	61.96	62	Y
		Terphenyl-d14	25	20.1008	80.40	80	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF223(2)	249240	2-Fluorobiphenyl	25	15.1385	60.55	61	Y
		Nitrobenzene-d5	25	14.5684	58.27	58	Y
		Terphenyl-d14	25	17.9359	71.74	72	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF224(2)	249240	2-Fluorobiphenyl	25	16.8185	67.27	67	Y
		Nitrobenzene-d5	25	15.8145	63.26	63	Y
		Terphenyl-d14	25	19.2672	77.07	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF225(2)	249240	2-Fluorobiphenyl	25	15.0944	60.38	60	Y
		Nitrobenzene-d5	25	14.4856	57.94	58	Y
		Terphenyl-d14	25	17.6526	70.61	71	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF226(2)	249240	2-Fluorobiphenyl	25	16.5271	66.11	66	Y
		Nitrobenzene-d5	25	14.9895	59.96	60	Y
		Terphenyl-d14	25	18.9952	75.98	76	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF227(2)	249240	2-Fluorobiphenyl	25	12.956	51.82	52	Y
		Nitrobenzene-d5	25	12.159	48.64	49	Y
		Terphenyl-d14	25	14.1869	56.75	57	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF228(2)	249240	2-Fluorobiphenyl	25	16.0054	64.02	64	Y
		Nitrobenzene-d5	25	14.9889	59.96	60	Y
		Terphenyl-d14	25	19.3257	77.30	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF229(2)	249240	2-Fluorobiphenyl	25	16.3019	65.21	65	Y
		Nitrobenzene-d5	25	15.542	62.17	62	Y
		Terphenyl-d14	25	19.0692	76.28	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF230(2)	249240	2-Fluorobiphenyl	25	14.6562	58.62	59	Y
		Nitrobenzene-d5	25	14.0049	56.02	56	Y
		Terphenyl-d14	25	18.9002	75.60	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF231(2)	249240	2-Fluorobiphenyl	25	16.0846	64.34	64	Y
		Nitrobenzene-d5	25	14.6478	58.59	59	Y
		Terphenyl-d14	25	18.9662	75.86	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF232(2)	249240	2-Fluorobiphenyl	25	14.1493	56.60	57	Y
		Nitrobenzene-d5	25	13.9355	55.74	56	Y
		Terphenyl-d14	25	19.0944	76.38	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF233(2)	249240	2-Fluorobiphenyl	25	12.9024	51.61	52	Y
		Nitrobenzene-d5	25	12.7187	50.87	51	Y
		Terphenyl-d14	25	17.2736	69.09	69	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF234(2)	249240	2-Fluorobiphenyl	25	12.0497	48.20	48	Y
		Nitrobenzene-d5	25	11.7883	47.15	47	Y
		Terphenyl-d14	25	15.2807	61.12	61	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF242(2)	249487	2-Fluorobiphenyl	25	26.4125	105.65	106	Y
		Nitrobenzene-d5	25	26.0087	104.03	104	Y
		Terphenyl-d14	25	31.555	126.22	126	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF243(2)	249487	2-Fluorobiphenyl	25	20.9884	83.95	84	Y
		Nitrobenzene-d5	25	20.836	83.34	83	Y
		Terphenyl-d14	25	26.6415	106.57	107	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF244(2)	249487	2-Fluorobiphenyl	25	17.8836	71.53	72	Y
		Nitrobenzene-d5	25	15.9795	63.92	64	Y
		Terphenyl-d14	25	24.6902	98.76	99	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF245(2)	249487	2-Fluorobiphenyl	25	19.083	76.33	76	Y
		Nitrobenzene-d5	25	18.3017	73.21	73	Y
		Terphenyl-d14	25	26.1695	104.68	105	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 30 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF246(2)	249487	2-Fluorobiphenyl	25	17.4937	69.97	70	Y
		Nitrobenzene-d5	25	16.63	66.52	67	Y
		Terphenyl-d14	25	25.4677	101.87	102	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF247(2)	249487	2-Fluorobiphenyl	25	17.4532	69.81	70	Y
		Nitrobenzene-d5	25	16.4601	65.84	66	Y
		Terphenyl-d14	25	24.7691	99.08	99	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF92(2)	249487	2-Fluorobiphenyl	25	15.3161	61.26	61	Y
		Nitrobenzene-d5	25	15.1741	60.70	61	Y
		Terphenyl-d14	25	24.1297	96.52	97	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF93(2)	249487	2-Fluorobiphenyl	25	17.3269	69.31	69	Y
		Nitrobenzene-d5	25	17.2707	69.08	69	Y
		Terphenyl-d14	25	24.205	96.82	97	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF244(2)	249487	2-Fluorobiphenyl	25	16.362	65.45	66	Y
		Nitrobenzene-d5	25	16.469	65.88	65	Y
		Terphenyl-d14	25	21.3829	85.53	86	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM12-AF4(2)	249563	2-Fluorobiphenyl	25	18.2697	73.08	73	Y
		Nitrobenzene-d5	25	15.5359	62.14	62	Y
		Terphenyl-d14	25	25.309	101.24	101	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP98(1)	249944	2-Fluorobiphenyl	25	15.0348	60.14	60	Y
		Nitrobenzene-d5	25	12.1536	48.61	49	Y
		Terphenyl-d14	25	19.626	78.50	79	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP99(1)	249944	2-Fluorobiphenyl	25	16.5148	66.06	66	Y
		Nitrobenzene-d5	25	12.2015	48.81	49	Y
		Terphenyl-d14	25	23.1917	92.77	93	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF249(3)	249944	2-Fluorobiphenyl	25	15.0241	60.10	60	Y
		Nitrobenzene-d5	25	11.7895	47.16	47	Y
		Terphenyl-d14	25	22.5948	90.38	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF250(3)	249944	2-Fluorobiphenyl	25	13.0704	52.28	52	Y
		Nitrobenzene-d5	25	10.3486	41.39	41	Y
		Terphenyl-d14	25	17.3981	69.59	70	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF251(3)	249944	2-Fluorobiphenyl	25	14.1703	56.68	57	Y
		Nitrobenzene-d5	25	11.3547	45.42	45	Y
		Terphenyl-d14	25	18.9485	75.79	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF252(3)	249944	2-Fluorobiphenyl	25	24.1742	96.70	97	Y
		Nitrobenzene-d5	25	20.4741	81.90	82	Y
		Terphenyl-d14	25	28.6174	114.47	114	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 31 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPM3-ITF-AF253(3)	249944	2-Fluorobiphenyl	25	17.5692	70.28	70	Y
		Nitrobenzene-d5	25	14.686	58.74	59	Y
		Terphenyl-d14	25	21.9251	87.70	88	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF254(3)	249944	2-Fluorobiphenyl	25	15.4063	61.63	62	Y
		Nitrobenzene-d5	25	12.0547	48.22	48	Y
		Terphenyl-d14	25	19.8584	79.43	79	Y
JPM3-ITF-AP255(2)	250165	2-Fluorobiphenyl	25	19.3045	77.22	77	Y
		Nitrobenzene-d5	25	17.1561	68.62	69	Y
		Terphenyl-d14	25	22.2704	89.08	89	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP256(2)	250165	2-Fluorobiphenyl	25	16.6147	66.46	66	Y
		Nitrobenzene-d5	25	12.9531	51.81	52	Y
		Terphenyl-d14	25	21.25	85.00	85	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP257(2)	250165	2-Fluorobiphenyl	25	19.0483	76.19	76	Y
		Nitrobenzene-d5	25	15.9864	63.95	64	Y
		Terphenyl-d14	25	22.8227	91.29	91	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP258(2)	250165	2-Fluorobiphenyl	25	14.3704	57.48	57	Y
		Nitrobenzene-d5	25	12.4942	49.98	50	Y
		Terphenyl-d14	25	19.1105	76.44	76	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF259(2)	250183	2-Fluorobiphenyl	25	19.3329	77.33	77	Y
		Nitrobenzene-d5	25	17.4725	69.89	70	Y
		Terphenyl-d14	25	21.6879	86.75	87	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AF260(2)	250183	2-Fluorobiphenyl	25	17.0888	68.36	68	Y
		Nitrobenzene-d5	25	14.4106	57.64	58	Y
		Terphenyl-d14	25	19.711	78.84	79	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP100(1)	250183	2-Fluorobiphenyl	25	19.3455	77.38	77	Y
		Nitrobenzene-d5	25	14.951	59.80	60	Y
		Terphenyl-d14	25	18.2376	72.95	73	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-A101(1)	250183	2-Fluorobiphenyl	25	18.1537	72.61	73	Y
		Nitrobenzene-d5	25	14.2756	57.10	57	Y
		Terphenyl-d14	25	21.958	87.83	88	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-A102(1)	250183	2-Fluorobiphenyl	25	15.812	63.25	63	Y
		Nitrobenzene-d5	25	12.6996	50.80	51	Y
		Terphenyl-d14	25	19.1828	76.73	77	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPM3-ITF-AP103(1)	250195	2-Fluorobiphenyl	25	17.6011	70.40	70	Y
		Nitrobenzene-d5	25	14.881	59.52	60	Y
		Terphenyl-d14	25	20.6541	82.62	83	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL2-PF1(2)	500-4270	2-Fluorobiphenyl	25	14.8093	59.24	59	Y
		Nitrobenzene-d5	25	13.9433	55.77	56	Y
		Terphenyl-d14	25	21.1978	84.79	85	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL2-PF2(2)	500-4270	2-Fluorobiphenyl	25	19.8497	79.40	79	Y
		Nitrobenzene-d5	25	15.3024	61.21	61	Y
		Terphenyl-d14	25	19.4728	77.89	78	Y
JPL2-PF3(2)	500-4270	2-Fluorobiphenyl	25	20.4767	81.91	82	Y
		Nitrobenzene-d5	25	14.7279	58.91	59	Y
		Terphenyl-d14	25	18.1566	72.63	73	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL2-AST-TF1(3)	500-4317	2-Fluorobiphenyl	25	18.304	73.22	73	Y
		Nitrobenzene-d5	25	14.4401	57.76	58	Y
		Terphenyl-d14	25	20.4779	81.91	82	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL2-AST-TF2(4)	500-4317	2-Fluorobiphenyl	3	2.15855	86.34	86	Y
		Nitrobenzene-d5	3	1.98456	79.38	79	Y
		Terphenyl-d14	3	2.09058	83.62	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL2-AST-TP1(0.5)	500-4317	2-Fluorobiphenyl	25	19.038	76.15	76	Y
		Nitrobenzene-d5	25	13.2089	52.84	53	Y
		Terphenyl-d14	25	21.8285	87.31	87	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL2-AST-TP2(0.5)	500-4317	2-Fluorobiphenyl	5	4.89543	97.91	98	Y
		Nitrobenzene-d5	5	3.4542	69.08	69	Y
		Terphenyl-d14	5	4.93288	98.66	99	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL2-AST-TP3(0.5)	500-4317	2-Fluorobiphenyl	6	5.64522	91.05	90	Y
		Nitrobenzene-d5	6	4.04095	65.18	65	Y
		Terphenyl-d14	6	5.53478	89.27	89	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL2-PF5(4)	500-4427	2-Fluorobiphenyl	25	22.0504	88.20	88	Y
		Nitrobenzene-d5	25	16.5724	66.29	66	Y
		Terphenyl-d14	25	22.2801	89.12	89	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL2-PF6(4)	500-4427	2-Fluorobiphenyl	25	19.1793	76.72	77	Y
		Nitrobenzene-d5	25	13.4027	53.61	54	Y
		Terphenyl-d14	25	23.1203	92.48	92	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL2-TP4(1)	500-4472	2-Fluorobiphenyl	2.5	2.07874	83.15	83	Y
		Nitrobenzene-d5	2.5	1.55868	62.35	62	Y
		Terphenyl-d14	2.5	2.44028	97.61	98	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL2-TP5(1)	500-4472	2-Fluorobiphenyl	2.5	2.46983	98.79	99	Y
		Nitrobenzene-d5	2.5	2.17035	86.81	87	Y
		Terphenyl-d14	2.5	2.61171	104.47	104	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 33 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL2-TP6(1)	500-4472	2-Fluorobiphenyl	25	19.5817	78.33	78	Y
		Nitrobenzene-d5	25	17.7949	71.18	71	Y
		Terphenyl-d14	25	21.4595	85.84	86	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL2-TF3(5)	500-4472	2-Fluorobiphenyl	25	18.568	74.27	74	Y
		Nitrobenzene-d5	25	16.621	66.48	66	Y
		Terphenyl-d14	25	22.7768	91.11	91	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL2-TF4(7)	500-4472	2-Fluorobiphenyl	25	20.0744	80.30	80	Y
		Nitrobenzene-d5	25	21.8577	87.43	87	Y
		Terphenyl-d14	25	22.1343	88.54	89	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN-1(3)	500-5265	2-Fluorobiphenyl	5	3.71535	74.31	74	Y
		Nitrobenzene-d5	5	4.1952	83.90	84	Y
		Terphenyl-d14	5	4.24868	84.97	85	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN-2(3)	500-5265	2-Fluorobiphenyl	5	4.06842	81.37	81	Y
		Nitrobenzene-d5	5	4.56555	91.31	91	Y
		Terphenyl-d14	5	4.52137	90.43	90	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN-3(3)	500-5265	2-Fluorobiphenyl	5	3.65921	73.18	73	Y
		Nitrobenzene-d5	5	4.0977	81.95	82	Y
		Terphenyl-d14	5	4.09134	81.83	82	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN-4(3)	500-5265	2-Fluorobiphenyl	5	4.12897	82.58	83	Y
		Nitrobenzene-d5	5	4.66403	93.28	93	Y
		Terphenyl-d14	5	4.72807	94.56	95	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN-5(3)	500-5265	2-Fluorobiphenyl	5	2.63841	52.77	53	Y
		Nitrobenzene-d5	5	2.9176	58.35	58	Y
		Terphenyl-d14	5	2.84731	56.95	57	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN-6(3)	500-5265	2-Fluorobiphenyl	5	3.95302	79.06	79	Y
		Nitrobenzene-d5	5	4.1988	83.98	84	Y
		Terphenyl-d14	5	4.36037	87.21	87	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN-7(3)	500-5265	2-Fluorobiphenyl	5	3.42501	68.50	69	Y
		Nitrobenzene-d5	5	3.81935	76.39	76	Y
		Terphenyl-d14	5	3.68098	73.62	74	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN-8(3)	500-5265	2-Fluorobiphenyl	5	4.14866	82.97	83	Y
		Nitrobenzene-d5	5	4.56213	91.24	91	Y
		Terphenyl-d14	5	4.6669	93.34	93	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN-9(3)	500-5265	2-Fluorobiphenyl	5	3.28204	65.64	66	Y
		Nitrobenzene-d5	5	3.58238	71.65	72	Y
		Terphenyl-d14	5	4.36043	87.21	87	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL5-PCN-10(3)	500-5265	2-Fluorobiphenyl	5	3.95455	79.09	79	Y
		Nitrobenzene-d5	5	4.09589	81.92	82	Y
		Terphenyl-d14	5	4.65732	93.15	93	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated %R	Reported %R	Acceptable Y/N
JPL5-PCN-11(3)	500-5285	2-Fluorobiphenyl	5	4.24852	84.97	85	Y
		Nitrobenzene-d5	5	4.35602	87.12	87	Y
		Terphenyl-d14	5	4.89593	97.92	98	Y
JPL5-PCN-12(3)	500-5285	2-Fluorobiphenyl	5	3.82945	76.59	77	Y
		Nitrobenzene-d5	5	3.91634	78.33	78	Y
		Terphenyl-d14	5	4.24211	84.84	85	Y
JPL5-PCN-13(3)	500-5285	2-Fluorobiphenyl	5	4.31552	86.31	86	Y
		Nitrobenzene-d5	5	4.54703	90.94	91	Y
		Terphenyl-d14	5	5.09208	101.84	102	Y
JPL5-PCN-14(3)	500-5285	2-Fluorobiphenyl	5	3.87252	77.45	77	Y
		Nitrobenzene-d5	5	4.19639	83.93	84	Y
		Terphenyl-d14	5	4.7892	95.78	96	Y
JPL5-PCN-15(3)	500-5285	2-Fluorobiphenyl	5	3.98199	79.64	80	Y
		Nitrobenzene-d5	5	4.22641	84.53	85	Y
		Terphenyl-d14	5	4.68197	93.64	94	Y
JPL5-PCN-16(3)	500-5285	2-Fluorobiphenyl	5	3.48328	69.67	70	Y
		Nitrobenzene-d5	5	3.76868	75.37	75	Y
		Terphenyl-d14	5	4.50523	90.10	90	Y
JPL5-PCN-17(3)	500-5285	2-Fluorobiphenyl	5	4.07118	81.42	81	Y
		Nitrobenzene-d5	5	4.35513	87.10	87	Y
		Terphenyl-d14	5	5.2713	105.43	105	Y
JPL5-PCN-18(3)	500-5285	2-Fluorobiphenyl	5	3.91998	78.40	78	Y
		Nitrobenzene-d5	5	4.27124	85.42	85	Y
		Terphenyl-d14	5	4.64797	92.96	93	Y
JPL5-PCN-19(3)	500-5285	2-Fluorobiphenyl	5	3.16582	63.32	63	Y
		Nitrobenzene-d5	5	3.35252	67.05	67	Y
		Terphenyl-d14	5	3.76391	75.28	75	Y
JPL5-PCN-20(3)	500-5285	2-Fluorobiphenyl	5	2.71843	54.37	54	Y
		Nitrobenzene-d5	5	2.71087	54.22	54	Y
		Terphenyl-d14	5	3.74768	74.95	75	Y
JPL5-PCN-21(3)	500-5285	2-Fluorobiphenyl	5	3.15147	63.03	63	Y
		Nitrobenzene-d5	5	3.27451	65.49	65	Y
		Terphenyl-d14	5	4.29425	85.89	86	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 35 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL5-PCN-22(3)	500-5285	2-Fluorobiphenyl	5	3.92628	78.53	79	Y
		Nitrobenzene-d5	5	4.24321	84.86	85	Y
		Terphenyl-d14	5	4.57287	91.46	91	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN-23(3)	500-5285	2-Fluorobiphenyl	5	3.36053	67.21	67	Y
		Nitrobenzene-d5	5	3.5505	71.01	71	Y
		Terphenyl-d14	5	4.43125	88.63	89	Y
JPL5-PCN-24(3)	500-5285	2-Fluorobiphenyl	5	2.7175	54.35	54	Y
		Nitrobenzene-d5	5	2.71871	54.37	54	Y
		Terphenyl-d14	5	3.29295	65.86	66	Y
JPL5-PCN-25(3)	500-5285	2-Fluorobiphenyl	5	2.83395	56.68	57	Y
		Nitrobenzene-d5	5	2.92528	58.51	59	Y
		Terphenyl-d14	5	3.56424	71.28	71	Y
JPL5-PCN2-1(5)	500-5933	2-Fluorobiphenyl	5	4.13348	82.67	83	Y
		Nitrobenzene-d5	5	2.87507	57.50	58	Y
		Terphenyl-d14	5	4.82238	96.45	96	Y
JPL5-PCN2-2(5)	500-5933	2-Fluorobiphenyl	5	3.83611	76.72	77	Y
		Nitrobenzene-d5	5	2.83893	56.78	57	Y
		Terphenyl-d14	5	4.21199	84.24	84	Y
JPL5-PCN2-3(5)	500-5933	2-Fluorobiphenyl	5	4.64428	92.89	93	Y
		Nitrobenzene-d5	5	3.27689	65.54	66	Y
		Terphenyl-d14	5	5.38853	107.77	108	Y
JPL5-PCN2-4(5)	500-5933	2-Fluorobiphenyl	5	4.6439	92.88	93	Y
		Nitrobenzene-d5	5	3.2638	65.28	65	Y
		Terphenyl-d14	5	5.42047	108.41	108	Y
JPL5-PCN2-5(5)	500-5933	2-Fluorobiphenyl	5	5.99152	119.83	120	Y
		Nitrobenzene-d5	5	4.77764	95.55	96	Y
		Terphenyl-d14	5	6.90456	138.09	138	Y
JPL5-PCN2-6(5)	500-5933	2-Fluorobiphenyl	5	3.99649	79.93	80	Y
		Nitrobenzene-d5	5	3.1521	63.04	63	Y
		Terphenyl-d14	5	7.65014	153.00	153	Y
JPL5-PCN2-7(5)	500-5933	2-Fluorobiphenyl	5	3.89848	77.97	78	Y
		Nitrobenzene-d5	5	2.9741	59.48	59	Y
		Terphenyl-d14	5	6.75114	135.02	135	Y
JPL5-PCN2-8(5)	500-5933	2-Fluorobiphenyl	5	4.67005	93.40	93	Y
		Nitrobenzene-d5	5	3.60364	72.07	72	Y
		Terphenyl-d14	5	9.2516	185.03	185	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
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Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 36 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL5-PCN2-9(5)	500-5933	2-Fluorobiphenyl	5	4.85552	97.11	97	Y
		Nitrobenzene-d5	5	3.68805	73.76	74	Y
		Terphenyl-d14	5	8.36599	167.32	167	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-10(5)	500-5933	2-Fluorobiphenyl	5	4.81327	96.27	96	Y
		Nitrobenzene-d5	5	3.80694	76.14	76	Y
		Terphenyl-d14	5	8.14554	162.91	163	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-11(5)	500-5954	2-Fluorobiphenyl	5	4.24838	84.97	85	Y
		Nitrobenzene-d5	5	3.34744	66.95	67	Y
		Terphenyl-d14	5	3.7169	74.34	74	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-12(5)	500-5954	2-Fluorobiphenyl	5	4.94515	98.90	99	Y
		Nitrobenzene-d5	5	3.88131	77.63	78	Y
		Terphenyl-d14	5	4.26803	85.36	85	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-13(5)	500-5954	2-Fluorobiphenyl	5	2.83165	56.63	57	Y
		Nitrobenzene-d5	5	2.50896	50.18	50	Y
		Terphenyl-d14	5	2.57085	51.42	51	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-14(5)	500-5954	2-Fluorobiphenyl	5	3.8391	76.78	77	Y
		Nitrobenzene-d5	5	3.39588	67.92	68	Y
		Terphenyl-d14	5	3.34851	66.97	67	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-15(5)	500-5954	2-Fluorobiphenyl	5	3.90004	78.00	78	Y
		Nitrobenzene-d5	5	3.34055	66.81	67	Y
		Terphenyl-d14	5	3.9228	78.46	78	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-16(5)	500-5954	2-Fluorobiphenyl	5	4.19269	83.85	84	Y
		Nitrobenzene-d5	5	3.33207	66.64	67	Y
		Terphenyl-d14	5	4.04527	80.91	81	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-17(5)	500-5954	2-Fluorobiphenyl	5	2.95419	59.08	59	Y
		Nitrobenzene-d5	5	2.52917	50.58	51	Y
		Terphenyl-d14	5	2.86892	57.38	57	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-18(5)	500-5954	2-Fluorobiphenyl	5	3.15531	63.11	63	Y
		Nitrobenzene-d5	5	2.77323	55.46	55	Y
		Terphenyl-d14	5	3.3924	67.85	68	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-19(5)	500-5954	2-Fluorobiphenyl	5	5.03588	100.72	101	Y
		Nitrobenzene-d5	5	3.79751	75.95	76	Y
		Terphenyl-d14	5	4.73927	94.79	95	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-20(5)	500-5954	2-Fluorobiphenyl	5	4.17295	83.46	83	Y
		Nitrobenzene-d5	5	3.4685	69.37	69	Y
		Terphenyl-d14	5	4.48784	89.76	90	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
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Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 37 of 39)

Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL5-PCN2-21(5)	500-5954	2-Fluorobiphenyl	5	4.62638	92.53	93	Y
		Nitrobenzene-d5	5	3.55006	71.00	71	Y
		Terphenyl-d14	5	4.875	97.50	97	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-22(5)	500-5954	2-Fluorobiphenyl	5	4.18849	83.77	84	Y
		Nitrobenzene-d5	5	3.3934	67.87	68	Y
		Terphenyl-d14	5	4.62926	92.59	93	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-23(5)	500-5954	2-Fluorobiphenyl	5	2.92615	58.52	59	Y
		Nitrobenzene-d5	5	2.57881	51.58	52	Y
		Terphenyl-d14	5	3.50728	70.15	70	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-24(5)	500-5954	2-Fluorobiphenyl	5	4.43761	88.75	89	Y
		Nitrobenzene-d5	5	3.42919	68.58	69	Y
		Terphenyl-d14	5	4.92602	98.52	99	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-25(5)	500-5954	2-Fluorobiphenyl	5	4.14048	82.81	83	Y
		Nitrobenzene-d5	5	3.11573	62.31	62	Y
		Terphenyl-d14	5	4.09283	81.86	82	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-26(5)	500-5954	2-Fluorobiphenyl	5	4.4508	89.02	89	Y
		Nitrobenzene-d5	5	3.50253	70.05	70	Y
		Terphenyl-d14	5	4.97299	99.46	99	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-PCN2-27(5)	500-5954	2-Fluorobiphenyl	5	3.24591	64.92	65	Y
		Nitrobenzene-d5	5	2.28058	45.61	46	Y
		Terphenyl-d14	5	3.26938	65.39	65	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-RS-AP1(.05)	500-14347	2-Fluorobiphenyl	25	19.1082	76.43	76	Y
		Nitrobenzene-d5	25	16.8311	67.32	67	Y
		Terphenyl-d14	25	20.7036	82.81	83	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-RS-AP2(.05)	500-14347	2-Fluorobiphenyl	25	17.9064	71.63	72	Y
		Nitrobenzene-d5	25	16.7208	66.88	67	Y
		Terphenyl-d14	25	20.8708	83.48	83	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-RS-AP3(.05)	500-14347	2-Fluorobiphenyl	25	21.0869	84.35	84	Y
		Nitrobenzene-d5	25	20.4864	81.95	82	Y
		Terphenyl-d14	25	21.8989	87.60	88	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-RS-AP4(.05)	500-14347	2-Fluorobiphenyl	25	18.9554	75.82	76	Y
		Nitrobenzene-d5	25	17.6106	70.44	70	Y
		Terphenyl-d14	25	21.0764	84.31	84	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
JPL5-RS-AP5(.05)	500-14347	2-Fluorobiphenyl	25	20.1194	80.48	80	Y
		Nitrobenzene-d5	25	18.3476	73.39	73	Y
		Terphenyl-d14	25	20.448	81.79	82	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL5-RS-AP6(.05)	500-14347	2-Fluorobiphenyl	25	21.0802	84.32	84	Y
		Nitrobenzene-d5	25	19.9458	79.78	80	Y
		Terphenyl-d14	25	24.3826	97.53	98	Y
JPL5-RS-AP7(.05)	500-14347	2-Fluorobiphenyl	25	21.8406	87.36	87	Y
		Nitrobenzene-d5	25	19.2324	76.93	77	Y
		Terphenyl-d14	25	22.0678	88.27	88	Y
JPL5-RS-AP8(.05)	500-14347	2-Fluorobiphenyl	25	20.814	83.26	83	Y
		Nitrobenzene-d5	25	18.632	74.53	75	Y
		Terphenyl-d14	25	27.2099	108.84	109	Y
JPL5-RS-AP9(.05)	500-14347	2-Fluorobiphenyl	25	18.4366	73.75	74	Y
		Nitrobenzene-d5	25	16.9235	67.69	68	Y
		Terphenyl-d14	25	19.4772	77.91	78	Y
JPL5-RS-AP10(.05)	500-14347	2-Fluorobiphenyl	25	17.3472	69.39	79	Y
		Nitrobenzene-d5	25	19.7047	78.82	69	Y
		Terphenyl-d14	25	21.6653	86.66	87	Y
JPL5-RS-AP11(.05)	500-14347	2-Fluorobiphenyl	25	18.391	73.56	74	Y
		Nitrobenzene-d5	25	17.045	68.18	68	Y
		Terphenyl-d14	25	21.3749	85.50	85	Y
JPL5-RS-AP12(.05)	500-14347	2-Fluorobiphenyl	25	16.7161	66.86	67	Y
		Nitrobenzene-d5	25	15.7071	62.83	63	Y
		Terphenyl-d14	25	16.8717	67.49	67	Y
JPL5-RS-AF1(6)	500-14347	2-Fluorobiphenyl	25	16.733	66.93	67	Y
		Nitrobenzene-d5	25	16.061	64.24	64	Y
		Terphenyl-d14	25	20.3654	81.46	81	Y
JPL5-RS-AF2(6)	500-14347	2-Fluorobiphenyl	25	15.3639	61.46	61	Y
		Nitrobenzene-d5	25	13.7328	54.93	55	Y
		Terphenyl-d14	25	20.6	82.40	82	Y
JPL5-RS-AF3(6)	500-14347	2-Fluorobiphenyl	25	14.8433	59.37	59	Y
		Nitrobenzene-d5	25	13.5453	54.18	54	Y
		Terphenyl-d14	25	18.5466	74.19	74	Y
JPL5-RS-AF4(6)	500-14347	2-Fluorobiphenyl	25	20.0958	80.38	80	Y
		Nitrobenzene-d5	25	19.1576	76.63	77	Y
		Terphenyl-d14	25	22.2788	89.12	89	Y
JPL5-RS-AF5(6)	500-14347	2-Fluorobiphenyl	25	17.011	68.04	68	Y
		Nitrobenzene-d5	25	16.2888	65.16	65	Y
		Terphenyl-d14	25	20.4164	81.67	82	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-3

PAH/PCN Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL5-RS-AF6(6)	500-14347	2-Fluorobiphenyl	25	17.4259	69.70	70	Y
		Nitrobenzene-d5	25	14.8422	59.37	59	Y
		Terphenyl-d14	25	18.8661	75.46	75	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL5-RS-AF7(6)	500-14347	2-Fluorobiphenyl	25	14.5459	58.18	58	Y
		Nitrobenzene-d5	25	12.4129	49.65	50	Y
		Terphenyl-d14	25	18.2391	72.96	73	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL5-RS-AF8(6)	500-14347	2-Fluorobiphenyl	25	18.6699	74.68	75	Y
		Nitrobenzene-d5	25	16.9235	67.69	68	Y
		Terphenyl-d14	25	20.1124	80.45	80	Y
Sample ID:	SDG	Surrogate	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
					%R	%R	Y/N
JPL5-RS-AF9(6)	500-14347	2-Fluorobiphenyl	25	18.8096	75.24	75	Y
		Nitrobenzene-d5	25	16.9242	67.70	68	Y
		Terphenyl-d14	25	18.4216	73.69	74	Y

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
SDG - sample delivery group

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 247532
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1319.733	79.168	79
Acenaphthylene	1667	0	1241.821	74.494	75
Acenaphthene	1667	0	1209.845	72.576	73
Fluorene	1667	0	1259.884	75.578	76
Phenanthrene	1667	0	1378.316	82.682	83
Anthracene	1667	0	1239.594	74.361	74
Fluoranthene	1667	0	1504.038	90.224	90
Pyrene	1667	0	1359.696	81.565	82
Benzo (a) anthracene	1667	0	1285.254	77.100	77
Chrysene	1667	0	1618.594	97.096	97
Benzo (b) fluoranthene	1667	0	1532.438	91.928	92
Benzo (k) fluoranthene	1667	0	1322.213	79.317	79
Benzo (a) pyrene	1667	0	1283.644	77.003	77
Indeno (1,2,3-cd) pyrene	1667	0	1368.286	82.081	82
Dibenzo (a,h) anthracene	1667	0	1427.089	85.608	86
Benzo (g,h,i) perylene	1667	0	1378.426	82.689	83

Laboratory: Severn TrentSDG: 247700
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1490.045	89.385	89
Acenaphthylene	1667	0	1510.825	90.631	91
Acenaphthene	1667	0	1479.639	88.761	89
Fluorene	1667	0	1503.152	90.171	90
Phenanthrene	1667	0	1573.651	94.400	94
Anthracene	1667	0	1575.368	94.503	95
Fluoranthene	1667	0	1506.542	90.374	90
Pyrene	1667	0	1649.677	98.961	99
Benzo (a) anthracene	1667	0	1502.685	90.143	90
Chrysene	1667	0	1621.814	97.289	97
Benzo (b) fluoranthene	1667	0	1079.679	64.768	65
Benzo (k) fluoranthene	1667	0	1137.529	68.238	68
Benzo (a) pyrene	1667	0	1072.573	64.342	64
Indeno (1,2,3-cd) pyrene	1667	0	1088.206	65.279	65
Dibenzo (a,h) anthracene	1667	0	1084.969	65.085	65
Benzo (g,h,i) perylene	1667	0	1089.679	65.368	65

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 247748Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1392.986	83.562	84
Acenaphthylene	1667	0	1493.575	89.597	90
Acenaphthene	1667	0	1475.392	88.506	89
Fluorene	1667	0	1685.226	101.093	101
Phenanthrene	1667	0	1628.11	97.667	98
Anthracene	1667	0	1671.193	100.252	101
Fluoranthene	1667	0	1493.765	89.608	90
Pyrene	1667	0	1512.052	90.705	91
Benzo (a) anthracene	1667	0	1661.177	99.651	100
Chrysene	1667	0	1556.221	93.355	93
Benzo (b) fluoranthene	1667	0	1179.992	70.785	71
Benzo (k) fluoranthene	1667	0	1264.291	75.842	76
Benzo (a) pyrene	1667	0	1184.695	71.067	71
Indeno (1,2,3-cd) pyrene	1667	0	1198.061	71.869	72
Dibenzo (a,h) anthracene	1667	0	1161.538	69.678	70
Benzo (g,h,i) perylene	1667	0	1181.278	70.863	71

Laboratory: Severn TrentSDG: 247836Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1350.546	81.017	81
Acenaphthylene	1667	0	1418.459	85.091	85
Acenaphthene	1667	0	1399.009	83.924	84
Fluorene	1667	0	1412.426	84.729	85
Phenanthrene	1667	0	1412.266	84.719	85
Anthracene	1667	0	1374.933	82.479	82
Fluoranthene	1667	0	1364.183	81.835	82
Pyrene	1667	0	1381.52	82.875	83
Benzo (a) anthracene	1667	0	1459.345	87.543	88
Chrysene	1667	0	1423.726	85.406	85
Benzo (b) fluoranthene	1667	0	1435.282	86.100	86
Benzo (k) fluoranthene	1667	0	1198.485	71.895	72
Benzo (a) pyrene	1667	0	1367.013	82.004	82
Indeno (1,2,3-cd) pyrene	1667	0	1379.47	82.752	83
Dibenzo (a,h) anthracene	1667	0	1327.55	79.637	80
Benzo (g,h,i) perylene	1667	0	1458.412	87.487	88

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 247811Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1283.374	76.987	77
Acenaphthylene	1667	0	1410.586	84.618	85
Acenaphthene	1667	0	1402.096	84.109	84
Fluorene	1667	0	1417.259	85.019	85
Phenanthrene	1667	0	1442.256	86.518	87
Anthracene	1667	0	1306.45	78.371	78
Fluoranthene	1667	0	1269.791	76.172	76
Pyrene	1667	0	1418.459	85.091	85
Benzo (a) anthracene	1667	0	1410.613	84.620	85
Chrysene	1667	0	1405.299	84.301	84
Benzo (b) fluoranthene	1667	0	1274.251	76.440	76
Benzo (k) fluoranthene	1667	0	1279.687	76.766	77
Benzo (a) pyrene	1667	0	1342.56	80.537	81
Indeno (1,2,3-cd) pyrene	1667	0	1387.786	83.251	83
Dibenzo (a,h) anthracene	1667	0	1354.976	81.282	81
Benzo (g,h,i) perylene	1667	0	1490.165	89.392	89

Laboratory: Severn TrentSDG: 247884Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1210.385	72.609	73
Acenaphthylene	1667	0	1237.044	74.208	74
Acenaphthene	1667	0	1234.531	74.057	74
Fluorene	1667	0	1276.841	76.595	77
Phenanthrene	1667	0	1204.705	72.268	72
Anthracene	1667	0	1216.858	72.997	73
Fluoranthene	1667	0	1153.565	69.200	69
Pyrene	1667	0	1256.454	75.372	75
Benzo (a) anthracene	1667	0	1213.451	72.793	73
Chrysene	1667	0	1202.355	72.127	72
Benzo (b) fluoranthene	1667	0	1248.061	74.869	75
Benzo (k) fluoranthene	1667	0	1018.466	61.096	61
Benzo (a) pyrene	1667	0	1194.578	71.660	72
Indeno (1,2,3-cd) pyrene	1667	0	1215.885	72.939	73
Dibenzo (a,h) anthracene	1667	0	1193.028	71.567	72
Benzo (g,h,i) perylene	1667	0	1310.92	78.639	79

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 247954
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1095.226	65.700	66
Acenaphthylene	1667	0	1144.402	68.650	69
Acenaphthene	1667	0	1103.789	66.214	66
Fluorene	1667	0	1155.475	69.315	69
Phenanthrene	1667	0	1179.112	70.733	71
Anthracene	1667	0	1080.133	64.795	65
Fluoranthene	1667	0	1149.179	68.937	69
Pyrene	1667	0	1143.982	68.625	69
Benzo (a) anthracene	1667	0	1191.621	71.483	71
Chrysene	1667	0	1085.082	65.092	65
Benzo (b) fluoranthene	1667	0	1162.212	69.719	70
Benzo (k) fluoranthene	1667	0	886.604	53.186	53
Benzo (a) pyrene	1667	0	1083.732	65.011	65
Indeno (1,2,3-cd) pyrene	1667	0	1132.065	67.910	68
Dibenzo (a,h) anthracene	1667	0	1082.919	64.962	65
Benzo (g,h,i) perylene	1667	0	1226.144	73.554	74

Laboratory: Severn TrentSDG: 247904
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1275.384	76.508	77
Acenaphthylene	1667	0	1418.826	85.113	85
Acenaphthene	1667	0	1398.086	83.868	84
Fluorene	1667	0	1486.395	89.166	89
Phenanthrene	1667	0	1518.625	91.099	91
Anthracene	1667	0	1334.38	80.047	80
Fluoranthene	1667	0	1326.237	79.558	80
Pyrene	1667	0	1453.575	87.197	87
Benzo (a) anthracene	1667	0	1632.864	97.952	98
Chrysene	1667	0	1374.913	82.478	82
Benzo (b) fluoranthene	1667	0	1454.452	87.250	87
Benzo (k) fluoranthene	1667	0	1095.902	65.741	66
Benzo (a) pyrene	1667	0	1345.793	80.731	81
Indeno (1,2,3-cd) pyrene	1667	0	1405.579	84.318	84
Dibenzo (a,h) anthracene	1667	0	1350.776	81.030	81
Benzo (g,h,i) perylene	1667	0	1540.218	92.395	92

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 248048Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1247.558	74.839	75
Acenaphthylene	1667	0	1289.57	77.359	77
Acenaphthene	1667	0	1252.464	75.133	75
Fluorene	1667	0	1336.663	80.184	80
Phenanthrene	1667	0	1355.953	81.341	81
Anthracene	1667	0	1419.662	85.163	85
Fluoranthene	1667	0	1470.109	88.189	88
Pyrene	1667	0	1514.078	90.827	91
Benzo (a) anthracene	1667	0	1391.876	83.496	84
Chrysene	1667	0	1412.506	84.733	85
Benzo (b) fluoranthene	1667	0	1417.306	85.021	85
Benzo (k) fluoranthene	1667	0	1390.013	83.384	83
Benzo (a) pyrene	1667	0	1366.43	81.969	82
Indeno (1,2,3-cd) pyrene	1667	0	1443.389	86.586	87
Dibenzo (a,h) anthracene	1667	0	1434.406	86.047	86
Benzo (g,h,i) perylene	1667	0	1523.878	91.414	91

Laboratory: Severn TrentSDG: 248065Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1120.905	67.241	67
Acenaphthylene	1667	0	1219.864	73.177	73
Acenaphthene	1667	0	1169.338	70.146	70
Fluorene	1667	0	1282.714	76.947	77
Phenanthrene	1667	0	1363.936	81.820	82
Anthracene	1667	0	1326.587	79.579	80
Fluoranthene	1667	0	1280.151	76.794	77
Pyrene	1667	0	1281.941	76.901	77
Benzo (a) anthracene	1667	0	1253.311	75.184	75
Chrysene	1667	0	1250.154	74.994	75
Benzo (b) fluoranthene	1667	0	1349.966	80.982	81
Benzo (k) fluoranthene	1667	0	1322.21	79.317	79
Benzo (a) pyrene	1667	0	1357.436	81.430	81
Indeno (1,2,3-cd) pyrene	1667	0	1452.002	87.103	87
Dibenzo (a,h) anthracene	1667	0	1438.466	86.291	86
Benzo (g,h,i) perylene	1667	0	1557.614	93.438	93

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 248160
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1384.949	83.080	83
Acenaphthylene	1667	0	1485.772	89.128	89
Acenaphthene	1667	0	1444.626	86.660	87
Fluorene	1667	0	1519.745	91.166	91
Phenanthrene	1667	0	1508.428	90.488	91
Anthracene	1667	0	1522.045	91.304	91
Fluoranthene	1667	0	1423.546	85.396	85
Pyrene	1667	0	1732.173	103.910	104
Benzo (a) anthracene	1667	0	1574.457	94.449	95
Chrysene	1667	0	1560.044	93.584	94
Benzo (b) fluoranthene	1667	0	1571.134	94.249	94
Benzo (k) fluoranthene	1667	0	1735.313	104.098	104
Benzo (a) pyrene	1667	0	1545.948	92.738	93
Indeno (1,2,3-cd) pyrene	1667	0	1472.465	88.330	88
Dibenzo (a,h) anthracene	1667	0	1624.174	97.431	97
Benzo (g,h,i) perylene	1667	0	1528.631	91.700	92

Laboratory: Severn TrentSDG: 248182
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1498.948	89.919	90
Acenaphthylene	1667	0	1568.121	94.068	94
Acenaphthene	1667	0	1538.381	92.284	92
Fluorene	1667	0	1652.573	99.135	99
Phenanthrene	1667	0	1688.666	101.300	101
Anthracene	1667	0	1623.774	97.407	97
Fluoranthene	1667	0	1759.822	105.568	106
Pyrene	1667	0	1699.493	101.949	102
Benzo (a) anthracene	1667	0	1739.396	104.343	104
Chrysene	1667	0	1661.93	99.696	100
Benzo (b) fluoranthene	1667	0	2099.976	125.973	126
Benzo (k) fluoranthene	1667	0	1640.46	98.408	98
Benzo (a) pyrene	1667	0	1775.766	106.525	107
Indeno (1,2,3-cd) pyrene	1667	0	1694.733	101.664	102
Dibenzo (a,h) anthracene	1667	0	1865.485	111.907	112
Benzo (g,h,i) perylene	1667	0	1767.969	106.057	106

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 248190Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1420.172	85.193	85
Acenaphthylene	1667	0	1515.792	90.929	91
Acenaphthene	1667	0	1496.835	89.792	90
Fluorene	1667	0	1563.961	93.819	94
Phenanthrene	1667	0	1682.437	100.926	101
Anthracene	1667	0	1414.136	84.831	85
Fluoranthene	1667	0	1676.027	100.542	101
Pyrene	1667	0	1556.591	93.377	93
Benzo (a) anthracene	1667	0	1587.097	95.207	95
Chrysene	1667	0	1546.878	92.794	93
Benzo (b) fluoranthene	1667	0	1695.153	101.689	102
Benzo (k) fluoranthene	1667	0	1667.57	100.034	100
Benzo (a) pyrene	1667	0	1604.187	96.232	96
Indeno (1,2,3-cd) pyrene	1667	0	1602.474	96.129	96
Dibenzo (a,h) anthracene	1667	0	1771.676	106.279	106
Benzo (g,h,i) perylene	1667	0	1682.583	100.935	101

Laboratory: Severn TrentSDG: 248208Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1506.968	90.400	90
Acenaphthylene	1667	0	1600.177	95.991	96
Acenaphthene	1667	0	1559.571	93.556	94
Fluorene	1667	0	1640.757	98.426	98
Phenanthrene	1667	0	1688.073	101.264	101
Anthracene	1667	0	1551.361	93.063	93
Fluoranthene	1667	0	1678.167	100.670	101
Pyrene	1667	0	1571.284	94.258	94
Benzo (a) anthracene	1667	0	1668.45	100.087	100
Chrysene	1667	0	1576.458	94.569	95
Benzo (b) fluoranthene	1667	0	1917.637	115.035	115
Benzo (k) fluoranthene	1667	0	1451.045	87.045	87
Benzo (a) pyrene	1667	0	1608.407	96.485	97
Indeno (1,2,3-cd) pyrene	1667	0	1641.9	98.494	99
Dibenzo (a,h) anthracene	1667	0	1801.515	108.069	108
Benzo (g,h,i) perylene	1667	0	1709.813	102.568	103

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 248233
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1452.219	87.116	87
Acenaphthylene	1667	0	1513.508	90.792	91
Acenaphthene	1667	0	1485.432	89.108	89
Fluorene	1667	0	1502.362	90.124	90
Phenanthrene	1667	0	1619.784	97.168	97
Anthracene	1667	0	1620.52	97.212	97
Fluoranthene	1667	0	1704.093	102.225	102
Pyrene	1667	0	1755.309	105.297	105
Benzo (a) anthracene	1667	0	1654.573	99.255	99
Chrysene	1667	0	1601.007	96.041	96
Benzo (b) fluoranthene	1667	0	1766.096	105.945	106
Benzo (k) fluoranthene	1667	0	1656.853	99.391	99
Benzo (a) pyrene	1667	0	1586.774	95.187	95
Indeno (1,2,3-cd) pyrene	1667	0	1500.298	90.000	90
Dibenzo (a,h) anthracene	1667	0	1650.91	99.035	99
Benzo (g,h,i) perylene	1667	0	1586.617	95.178	95

Laboratory: Severn Trent

SDG: 248248
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1325.16	79.494	80
Acenaphthylene	1667	0	1407.259	84.419	84
Acenaphthene	1667	0	1354.286	81.241	81
Fluorene	1667	0	1345.107	80.690	81
Phenanthrene	1667	0	1417.092	85.009	85
Anthracene	1667	0	1424.249	85.438	85
Fluoranthene	1667	0	1430.869	85.835	86
Pyrene	1667	0	1555.468	93.309	93
Benzo (a) anthracene	1667	0	1468.839	88.113	88
Chrysene	1667	0	1402.129	84.111	84
Benzo (b) fluoranthene	1667	0	1641.444	98.467	98
Benzo (k) fluoranthene	1667	0	1496.508	89.773	90
Benzo (a) pyrene	1667	0	1476.909	88.597	89
Indeno (1,2,3-cd) pyrene	1667	0	1406.453	84.370	84
Dibenzo (a,h) anthracene	1667	0	1518.691	91.103	91
Benzo (g,h,i) perylene	1667	0	1463.422	87.788	88

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 248271Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1452.219	87.116	87
Acenaphthylene	1667	0	1513.508	90.792	91
Acenaphthene	1667	0	1485.432	89.108	89
Fluorene	1667	0	1502.362	90.124	90
Phenanthrene	1667	0	1619.784	97.168	97
Anthracene	1667	0	1620.52	97.212	97
Fluoranthene	1667	0	1704.093	102.225	102
Pyrene	1667	0	1755.309	105.297	105
Benzo (a) anthracene	1667	0	1654.573	99.255	99
Chrysene	1667	0	1601.007	96.041	96
Benzo (b) fluoranthene	1667	0	1766.096	105.945	106
Benzo (k) fluoranthene	1667	0	1656.853	99.391	99
Benzo (a) pyrene	1667	0	1586.774	95.187	95
Indeno (1,2,3-cd) pyrene	1667	0	1500.298	90.000	90
Dibenzo (a,h) anthracene	1667	0	1650.91	99.035	99
Benzo (g,h,i) perylene	1667	0	1586.617	95.178	95

Laboratory: Severn TrentSDG: 248289Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1161.072	69.650	70
Acenaphthylene	1667	0	1279.681	76.766	77
Acenaphthene	1667	0	1232.444	73.932	74
Fluorene	1667	0	1304.287	78.242	78
Phenanthrene	1667	0	1341.2	80.456	80
Anthracene	1667	0	1298.824	77.914	78
Fluoranthene	1667	0	1349.127	80.931	81
Pyrene	1667	0	1445.692	86.724	87
Benzo (a) anthracene	1667	0	1289.797	77.372	77
Chrysene	1667	0	1360.27	81.600	82
Benzo (b) fluoranthene	1667	0	1530.548	91.815	92
Benzo (k) fluoranthene	1667	0	1247.638	74.843	75
Benzo (a) pyrene	1667	0	1296.144	77.753	78
Indeno (1,2,3-cd) pyrene	1667	0	1314.777	78.871	79
Dibenzo (a,h) anthracene	1667	0	1423.116	85.370	85
Benzo (g,h,i) perylene	1667	0	1395.116	83.690	84

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 248301
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1335.423	80.109	80
Acenaphthylene	1667	0	1372.393	82.327	82
Acenaphthene	1667	0	1331.297	79.862	80
Fluorene	1667	0	1357.45	81.431	81
Phenanthrene	1667	0	1386.479	83.172	83
Anthracene	1667	0	1447.506	86.833	87
Fluoranthene	1667	0	1435.222	86.096	86
Pyrene	1667	0	1405.466	84.311	84
Benzo (a) anthracene	1667	0	1416.859	84.995	85
Chrysene	1667	0	1425.309	85.501	86
Benzo (b) fluoranthene	1667	0	1433.396	85.987	86
Benzo (k) fluoranthene	1667	0	1061.683	63.688	64
Benzo (a) pyrene	1667	0	1301.57	78.079	78
Indeno (1,2,3-cd) pyrene	1667	0	1389.939	83.380	83
Dibenzo (a,h) anthracene	1667	0	1420.526	85.215	85
Benzo (g,h,i) perylene	1667	0	1515.675	90.922	91

Laboratory: Severn Trent

SDG: 248327
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1293.27	77.581	78
Acenaphthylene	1667	0	1359.1	81.530	82
Acenaphthene	1667	0	1320.967	79.242	79
Fluorene	1667	0	1350.57	81.018	81
Phenanthrene	1667	0	1396.773	83.790	84
Anthracene	1667	0	1423.609	85.399	85
Fluoranthene	1667	0	1416.906	84.997	85
Pyrene	1667	0	1325.58	79.519	80
Benzo (a) anthracene	1667	0	1359.45	81.551	82
Chrysene	1667	0	1368.76	82.109	82
Benzo (b) fluoranthene	1667	0	1359.736	81.568	82
Benzo (k) fluoranthene	1667	0	1011.063	60.652	61
Benzo (a) pyrene	1667	0	1228.738	73.710	74
Indeno (1,2,3-cd) pyrene	1667	0	1340.78	80.431	80
Dibenzo (a,h) anthracene	1667	0	1352.41	81.128	81
Benzo (g,h,i) perylene	1667	0	1458.705	87.505	88

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 248423
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1478.622	88.700	89
Acenaphthylene	1667	0	1535.531	92.113	92
Acenaphthene	1667	0	1483.292	88.980	89
Fluorene	1667	0	1765.842	105.929	106
Phenanthrene	1667	0	1617.87	97.053	97
Anthracene	1667	0	1561.834	93.691	94
Fluoranthene	1667	0	1564.001	93.821	94
Pyrene	1667	0	1568.224	94.075	94
Benzo (a) anthracene	1667	0	1563.088	93.767	94
Chrysene	1667	0	1430.832	85.833	86
Benzo (b) fluoranthene	1667	0	1711.376	102.662	103
Benzo (k) fluoranthene	1667	0	1354.39	81.247	81
Benzo (a) pyrene	1667	0	1533.605	91.998	92
Indeno (1,2,3-cd) pyrene	1667	0	1605.264	96.297	96
Dibenzo (a,h) anthracene	1667	0	1629.077	97.725	98
Benzo (g,h,i) perylene	1667	0	1650.82	99.029	99

Laboratory: Severn TrentSDG: 248439
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1454.075	87.227	87
Acenaphthylene	1667	0	1560.304	93.600	94
Acenaphthene	1667	0	1492.628	89.540	90
Fluorene	1667	0	1787.405	107.223	107
Phenanthrene	1667	0	1611.767	96.687	97
Anthracene	1667	0	1554.808	93.270	93
Fluoranthene	1667	0	1518.728	91.105	91
Pyrene	1667	0	1538.695	92.303	92
Benzo (a) anthracene	1667	0	1475.792	88.530	89
Chrysene	1667	0	1419.209	85.136	85
Benzo (b) fluoranthene	1667	0	1673.55	100.393	100
Benzo (k) fluoranthene	1667	0	1353.97	81.222	81
Benzo (a) pyrene	1667	0	1517.088	91.007	91
Indeno (1,2,3-cd) pyrene	1667	0	1562.784	93.748	94
Dibenzo (a,h) anthracene	1667	0	1589.274	95.337	95
Benzo (g,h,i) perylene	1667	0	1607.971	96.459	96

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 248537
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1155.235	69.300	69
Acenaphthylene	1667	0	1307.72	78.448	78
Acenaphthene	1667	0	1319.33	79.144	79
Fluorene	1667	0	1334.797	80.072	80
Phenanthrene	1667	0	1434.226	86.036	86
Anthracene	1667	0	1380.346	82.804	83
Fluoranthene	1667	0	1419.366	85.145	85
Pyrene	1667	0	1546.251	92.757	93
Benzo (a) anthracene	1667	0	1455.659	87.322	87
Chrysene	1667	0	1802.205	108.111	108
Benzo (b) fluoranthene	1667	0	1631.037	97.843	98
Benzo (k) fluoranthene	1667	0	1684.69	101.061	101
Benzo (a) pyrene	1667	0	1462.205	87.715	88
Indeno (1,2,3-cd) pyrene	1667	0	1369.423	82.149	82
Dibenzo (a,h) anthracene	1667	0	1321.717	79.287	79
Benzo (g,h,i) perylene	1667	0	1387.649	83.242	83

Laboratory: Severn Trent

SDG: 248926
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1149.592	68.962	69
Acenaphthylene	1667	0	1250.251	75.000	75
Acenaphthene	1667	0	1202.338	72.126	72
Fluorene	1667	0	1270.614	76.222	76
Phenanthrene	1667	0	1303.877	78.217	78
Anthracene	1667	0	1324.31	79.443	79
Fluoranthene	1667	0	1239.111	74.332	74
Pyrene	1667	0	1309.6	78.560	79
Benzo (a) anthracene	1667	0	1256.744	75.390	75
Chrysene	1667	0	1225.254	73.501	74
Benzo (b) fluoranthene	1667	0	1389.606	83.360	83
Benzo (k) fluoranthene	1667	0	1223.148	73.374	73
Benzo (a) pyrene	1667	0	1323.287	79.381	79
Indeno (1,2,3-cd) pyrene	1667	0	1262.944	75.761	76
Dibenzo (a,h) anthracene	1667	0	1333.58	79.999	80
Benzo (g,h,i) perylene	1667	0	1246.934	74.801	75

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 248981
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1242.564	74.539	75
Acenaphthylene	1667	0	1436.946	86.200	86
Acenaphthene	1667	0	1378.52	82.695	83
Fluorene	1667	0	1332.627	79.942	80
Phenanthrene	1667	0	1349.72	80.967	81
Anthracene	1667	0	1354.813	81.273	81
Fluoranthene	1667	0	1386.653	83.183	83
Pyrene	1667	0	1547.578	92.836	93
Benzo (a) anthracene	1667	0	1386.586	83.179	83
Chrysene	1667	0	1315.69	78.926	79
Benzo (b) fluoranthene	1667	0	1317.12	79.011	79
Benzo (k) fluoranthene	1667	0	1210.395	72.609	73
Benzo (a) pyrene	1667	0	1226.528	73.577	74
Indeno (1,2,3-cd) pyrene	1667	0	1238.458	74.293	74
Dibenzo (a,h) anthracene	1667	0	1204.301	72.244	72
Benzo (g,h,i) perylene	1667	0	1370.446	82.210	82

Laboratory: Severn TrentSDG: 249025
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1137.952	68.263	68
Acenaphthylene	1667	0	1374.583	82.458	82
Acenaphthene	1667	0	1315.51	78.915	79
Fluorene	1667	0	1227.068	73.609	74
Phenanthrene	1667	0	1267.624	76.042	76
Anthracene	1667	0	1229.061	73.729	74
Fluoranthene	1667	0	1281.537	76.877	77
Pyrene	1667	0	1360.31	81.602	82
Benzo (a) anthracene	1667	0	1253.447	75.192	75
Chrysene	1667	0	1270.934	76.241	76
Benzo (b) fluoranthene	1667	0	1318.203	79.076	79
Benzo (k) fluoranthene	1667	0	1054.046	63.230	63
Benzo (a) pyrene	1667	0	1160.025	69.588	70
Indeno (1,2,3-cd) pyrene	1667	0	1195.378	71.708	72
Dibenzo (a,h) anthracene	1667	0	1151.195	69.058	69
Benzo (g,h,i) perylene	1667	0	1327.87	79.656	80

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 249072
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1147.519	68.837	68
Acenaphthylene	1667	0	1365.65	81.923	82
Acenaphthene	1667	0	1322.963	79.362	79
Fluorene	1667	0	1289.571	77.359	77
Phenanthrene	1667	0	1298.277	77.881	78
Anthracene	1667	0	1213.908	72.820	73
Fluoranthene	1667	0	1245.894	74.739	75
Pyrene	1667	0	1394.799	83.671	84
Benzo (a) anthracene	1667	0	1325.763	79.530	80
Chrysene	1667	0	1268.997	76.125	76
Benzo (b) fluoranthene	1667	0	1343.65	80.603	81
Benzo (k) fluoranthene	1667	0	1092.359	65.528	66
Benzo (a) pyrene	1667	0	1172.938	70.362	70
Indeno (1,2,3-cd) pyrene	1667	0	1152.825	69.156	69
Dibenzo (a,h) anthracene	1667	0	1105.972	66.345	66
Benzo (g,h,i) perylene	1667	0	1256.234	75.359	75

Laboratory: Severn Trent

SDG: 249177
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1281.477	76.873	77
Acenaphthylene	1667	0	1314.93	78.880	79
Acenaphthene	1667	0	1298.147	77.873	78
Fluorene	1667	0	1377.793	82.651	83
Phenanthrene	1667	0	1488.208	89.275	89
Anthracene	1667	0	1343.79	80.611	81
Fluoranthene	1667	0	1366.056	81.947	82
Pyrene	1667	0	1415.816	84.932	85
Benzo (a) anthracene	1667	0	1434.616	86.060	86
Chrysene	1667	0	1447.662	86.842	87
Benzo (b) fluoranthene	1667	0	1295.954	77.742	78
Benzo (k) fluoranthene	1667	0	1470.579	88.217	88
Benzo (a) pyrene	1667	0	1379.35	82.744	83
Indeno (1,2,3-cd) pyrene	1667	0	1366.746	81.988	82
Dibenzo (a,h) anthracene	1667	0	1339.95	80.381	80
Benzo (g,h,i) perylene	1667	0	1516.448	90.969	91

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 249398Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1327.213	79.617	80
Acenaphthylene	1667	0	1363.766	81.810	82
Acenaphthene	1667	0	1385.189	83.095	83
Fluorene	1667	0	1397.693	83.845	84
Phenanthrene	1667	0	1452.465	87.130	87
Anthracene	1667	0	1546.361	92.763	93
Fluoranthene	1667	0	1463.709	87.805	88
Pyrene	1667	0	1832.035	109.900	110
Benzo (a) anthracene	1667	0	1427.012	85.604	86
Chrysene	1667	0	1673.333	100.380	100
Benzo (b) fluoranthene	1667	0	1452.919	87.158	87
Benzo (k) fluoranthene	1667	0	1492.645	89.541	90
Benzo (a) pyrene	1667	0	1426.036	85.545	86
Indeno (1,2,3-cd) pyrene	1667	0	1409.239	84.537	85
Dibenzo (a,h) anthracene	1667	0	1377.716	82.646	83
Benzo (g,h,i) perylene	1667	0	1464.165	87.832	88

Laboratory: Severn TrentSDG: 249439Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1463.005	87.763	88
Acenaphthylene	1667	0	1463.179	87.773	88
Acenaphthene	1667	0	1462.545	87.735	88
Fluorene	1667	0	1546.561	92.775	93
Phenanthrene	1667	0	1513.218	90.775	91
Anthracene	1667	0	1533.808	92.010	92
Fluoranthene	1667	0	1499.732	89.966	90
Pyrene	1667	0	1624.674	97.461	97
Benzo (a) anthracene	1667	0	1545.888	92.735	93
Chrysene	1667	0	1741.866	104.491	105
Benzo (b) fluoranthene	1667	0	1586.401	95.165	95
Benzo (k) fluoranthene	1667	0	1412.183	84.714	85
Benzo (a) pyrene	1667	0	1511.518	90.673	91
Indeno (1,2,3-cd) pyrene	1667	0	1497.102	89.808	90
Dibenzo (a,h) anthracene	1667	0	1511.052	90.645	91
Benzo (g,h,i) perylene	1667	0	1596.627	95.778	96

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 249240Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1413.309	84.782	85
Acenaphthylene	1667	0	1415.353	84.904	85
Acenaphthene	1667	0	1397.103	83.809	84
Fluorene	1667	0	1491.978	89.501	90
Phenanthrene	1667	0	1536.521	92.173	92
Anthracene	1667	0	1445.156	86.692	87
Fluoranthene	1667	0	1529.798	91.770	92
Pyrene	1667	0	1550.221	92.995	93
Benzo (a) anthracene	1667	0	1533.835	92.012	92
Chrysene	1667	0	1790.132	107.386	107
Benzo (b) fluoranthene	1667	0	1572.108	94.308	94
Benzo (k) fluoranthene	1667	0	1459.385	87.546	88
Benzo (a) pyrene	1667	0	1511.215	90.655	91
Indeno (1,2,3-cd) pyrene	1667	0	1527.785	91.649	92
Dibenzo (a,h) anthracene	1667	0	1546.871	92.794	93
Benzo (g,h,i) perylene	1667	0	1617.847	97.051	97

Laboratory: Severn TrentSDG: 249563Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1361.663	81.683	82
Acenaphthylene	1667	0	1406.546	84.376	84
Acenaphthene	1667	0	1417.106	85.009	85
Fluorene	1667	0	1437.942	86.259	86
Phenanthrene	1667	0	1376.35	82.564	83
Anthracene	1667	0	1301.257	78.060	78
Fluoranthene	1667	0	1349.867	80.976	81
Pyrene	1667	0	1443.052	86.566	87
Benzo (a) anthracene	1667	0	1348.107	80.870	81
Chrysene	1667	0	1593.017	95.562	96
Benzo (b) fluoranthene	1667	0	1141.409	68.471	68
Benzo (k) fluoranthene	1667	0	1453.732	87.206	87
Benzo (a) pyrene	1667	0	1262.194	75.716	76
Indeno (1,2,3-cd) pyrene	1667	0	1330.93	79.840	80
Dibenzo (a,h) anthracene	1667	0	1260.197	75.597	76
Benzo (g,h,i) perylene	1667	0	1370.43	82.209	82

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 249944
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1399.533	83.955	84
Acenaphthylene	1667	0	1271.647	76.284	76
Acenaphthene	1667	0	1484.785	89.069	89
Fluorene	1667	0	1424.906	85.477	85
Phenanthrene	1667	0	1619.124	97.128	97
Anthracene	1667	0	1536.338	92.162	92
Fluoranthene	1667	0	1713.68	102.800	103
Pyrene	1667	0	1456.759	87.388	87
Benzo (a) anthracene	1667	0	1490.698	89.424	89
Chrysene	1667	0	1456.359	87.364	87
Benzo (b) fluoranthene	1667	0	1089.832	65.377	65
Benzo (k) fluoranthene	1667	0	1400.916	84.038	84
Benzo (a) pyrene	1667	0	1260.774	75.631	76
Indeno (1,2,3-cd) pyrene	1667	0	1334.887	80.077	80
Dibenzo (a,h) anthracene	1667	0	1372.01	82.304	82
Benzo (g,h,i) perylene	1667	0	1392.506	83.534	84

Laboratory: Severn Trent

SDG: 250165
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1238.681	74.306	74
Acenaphthylene	1667	0	1407.646	84.442	84
Acenaphthene	1667	0	1417.422	85.028	85
Fluorene	1667	0	1476.082	88.547	89
Phenanthrene	1667	0	1430.966	85.841	86
Anthracene	1667	0	1428.372	85.685	86
Fluoranthene	1667	0	1452.519	87.134	87
Pyrene	1667	0	1379.166	82.733	83
Benzo (a) anthracene	1667	0	1315.077	78.889	79
Chrysene	1667	0	1333.56	79.998	80
Benzo (b) fluoranthene	1667	0	1239.038	74.327	74
Benzo (k) fluoranthene	1667	0	1223.728	73.409	73
Benzo (a) pyrene	1667	0	1204.631	72.263	72
Indeno (1,2,3-cd) pyrene	1667	0	1249.074	74.929	75
Dibenzo (a,h) anthracene	1667	0	1204.918	72.281	72
Benzo (g,h,i) perylene	1667	0	1317.477	79.033	79

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 250183
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1422.499	85.333	85
Acenaphthylene	1667	0	1326.077	79.549	80
Acenaphthene	1667	0	1753.776	105.206	105
Fluorene	1667	0	1199.338	71.946	72
Phenanthrene	1667	0	1314.314	78.843	79
Anthracene	1667	0	1243.724	74.609	75
Fluoranthene	1667	0	1495.538	89.714	90
Pyrene	1667	0	1309.99	78.584	79
Benzo (a) anthracene	1667	0	1515.385	90.905	91
Chrysene	1667	0	1263.131	75.773	76
Benzo (b) fluoranthene	1667	0	1551.861	93.093	93
Benzo (k) fluoranthene	1667	0	1061.026	63.649	64
Benzo (a) pyrene	1667	0	1550.718	93.024	93
Indeno (1,2,3-cd) pyrene	1667	0	1471.659	88.282	88
Dibenzo (a,h) anthracene	1667	0	1665.6	99.916	100
Benzo (g,h,i) perylene	1667	0	1545.538	92.714	93

Laboratory: Severn TrentSDG: 250195
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1361.35	81.665	82
Acenaphthylene	1667	0	1504.658	90.261	90
Acenaphthene	1667	0	1496.665	89.782	90
Fluorene	1667	0	1558.128	93.469	93
Phenanthrene	1667	0	1485.982	89.141	89
Anthracene	1667	0	1518.517	91.093	91
Fluoranthene	1667	0	1570.624	94.219	94
Pyrene	1667	0	1512.538	90.734	91
Benzo (a) anthracene	1667	0	1422.676	85.343	85
Chrysene	1667	0	1454.612	87.259	87
Benzo (b) fluoranthene	1667	0	1365.17	81.894	82
Benzo (k) fluoranthene	1667	0	1465.289	87.900	88
Benzo (a) pyrene	1667	0	1361.55	81.677	82
Indeno (1,2,3-cd) pyrene	1667	0	1349.713	80.967	81
Dibenzo (a,h) anthracene	1667	0	1286.59	77.180	77
Benzo (g,h,i) perylene	1667	0	1394.846	83.674	84

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Test America

SDG: 500-4270
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Naphthalene	1667	0	1450	86.983	87
Acenaphthylene	1667	0	1490	89.382	89
Acenaphthene	1667	0	1360	81.584	82
Fluorene	1667	0	1300	77.984	78
Phenanthrene	1667	0	1490	89.382	89
Anthracene	1667	0	1600	95.981	96
Fluoranthene	1667	0	1550	92.981	93
Pyrene	1667	0	1360	81.584	81
Benzo (a) anthracene	1667	0	1340	80.384	80
Chrysene	1667	0	1550	92.981	93
Benzo (b) fluoranthene	1667	0	1440	86.383	87
Benzo (k) fluoranthene	1667	0	1350	80.984	81
Benzo (a) pyrene	1667	0	1530	91.782	92
Indeno (1,2,3-cd) pyrene	1667	0	1350	80.984	81
Dibenzo (a,h) anthracene	1667	0	1560	93.581	93
Benzo (g,h,i) perylene	1667	0	1340	80.384	81

Laboratory: Test America

SDG: 500-4317
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Acenaphthene	1667	0	1408	84.445	84
Pyrene	1667	0	1282	76.911	77
Naphthalene	1667	0	1289	77.349	77
Acenaphthylene	1667	0	1472	88.296	88
Fluorene	1667	0	1220	73.197	73
Phenanthrene	1667	0	1505	90.294	90
Anthracene	1667	0	1248	74.871	75
Fluoranthene	1667	0	1410	84.601	85
Benzo (a) anthracene	1667	0	1332	79.886	80
Chrysene	1667	0	1339	80.324	80
Benzo (b) fluoranthene	1667	0	1520	91.182	91
Benzo (k) fluoranthene	1667	0	1360	81.584	82
Benzo (a) pyrene	1667	0	1500	89.982	90
Indeno (1,2,3-cd) pyrene	1667	0	1580	94.781	95
Dibenzo (a,h) anthracene	1667	0	1540	92.382	93
Benzo (g,h,i) perylene	1667	0	1600	95.981	96

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Test AmericaSDG: 500-4427Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Acenaphthene	1667	0	1350	80.984	81
Pyrene	1667	0	1340	80.384	80
Naphthalene	1667	0	1430	85.783	86
Acenaphthylene	1667	0	1420	85.183	85
Fluorene	1667	0	1450	86.983	87
Phenanthrene	1667	0	1350	80.984	81
Anthracene	1667	0	1510	90.582	91
Fluoranthene	1667	0	1520	91.182	91
Benzo (a) anthracene	1667	0	1500	89.982	90
Chrysene	1667	0	1340	80.384	80
Benzo (b) fluoranthene	1667	0	1490	89.382	90
Benzo (k) fluoranthene	1667	0	1400	83.983	84
Benzo (a) pyrene	1667	0	1360	81.584	82
Indeno (1,2,3-cd) pyrene	1667	0	1330	79.784	80
Dibenzo (a,h) anthracene	1667	0	1500	89.982	90
Benzo (g,h,i) perylene	1667	0	1660	99.580	99

Laboratory: Test AmericaSDG: 500-4472Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result

SC = Sample Result

SA = Spike amount added

Percent Recovery (%R) = (SSC - SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Acenaphthene	1667	0	1290	77.385	77
Pyrene	1667	0	1280	76.785	77
Naphthalene	1667	0	1340	80.384	80
Acenaphthylene	1667	0	1350	80.984	81
Fluorene	1667	0	1460	87.582	88
Phenanthrene	1667	0	1480	88.782	89
Anthracene	1667	0	1510	90.582	91
Fluoranthene	1667	0	1410	84.583	84
Benzo (a) anthracene	1667	0	1360	81.584	82
Chrysene	1667	0	1390	83.383	83
Benzo (b) fluoranthene	1667	0	1450	86.983	87
Benzo (k) fluoranthene	1667	0	1320	79.184	79
Benzo (a) pyrene	1667	0	1390	83.383	83
Indeno (1,2,3-cd) pyrene	1667	0	1290	77.385	77
Dibenzo (a,h) anthracene	1667	0	1390	83.383	84
Benzo (g,h,i) perylene	1667	0	1650	98.980	99

ID - identification

PAH - polynuclear aromatic hydrocarbon

PCN - polychlorinated naphthalene

ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Test America

SDG: 500-5265
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Monochloronaphthalene	333	0	284	85.285	85
Dichloronaphthalene	333	0	264	79.279	79
Tetrachloronaphthalene	333	0	273	81.982	82
Octachloronaphthalene	333	0	316	94.895	95

Laboratory: Test America

SDG: 500-5285
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Monochloronaphthalene	333	0	281	84.384	84
Dichloronaphthalene	333	0	289	86.787	87
Tetrachloronaphthalene	333	0	293	87.988	88
Octachloronaphthalene	333	0	337	101.201	101

Laboratory: Test America

SDG: 500-5933
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Monochloronaphthalene	333	0	248	74.474	75
Dichloronaphthalene	333	0	282	84.685	84
Tetrachloronaphthalene	333	0	290	87.087	87
Octachloronaphthalene	333	0	276	82.883	83

Laboratory: Test America

SDG: 500-5954
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Monochloronaphthalene	333	0	226	67.868	68
Dichloronaphthalene	333	0	258	77.477	77
Tetrachloronaphthalene	333	0	271	81.381	81
Octachloronaphthalene	333	0	259	77.778	78

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
ug/L - micrograms per liter

Table F-4

PAH/PCN Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Test America

SDG: 500-14347
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	Spike Added (ug/L)	Blank Concentration (ug/L)	LCS Concentration (ug/L)	%R Recalculated	% R Reported
Sample ID: VBLKHC					
Acenaphthene	1660	0	1410	84.940	85
Acenaphthylene	1660	0	1330	80.120	80
Anthracene	1660	0	1350	81.325	81
Benzo (a) anthracene	1660	0	1560	93.976	94
Benzo (a) pyrene	1660	0	1380	83.133	83
Benzo (b) fluoranthene	1660	0	1380	83.133	83
Benzo (g,h,i) perylene	1660	0	1480	89.157	89
Benzo (k) fluoranthene	1660	0	1380	83.133	83
Chrysene	1660	0	1600	96.386	96
Dibenzo (a,h) anthracene	1660	0	1360	81.928	82
Fluoranthene	1660	0	1320	79.518	79
Fluorene	1660	0	1750	105.422	105
Indeno (1,2,3-cd) pyrene	1660	0	1400	84.337	84
Naphthalene	1660	0	1310	78.916	79
Phenanthrene	1660	0	1370	82.530	82
Pyrene	1660	0	1520	91.566	91

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
ug/L - micrograms per liter

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 247532
Sample ID: JPM3-ITF-CP7(0.5)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100 / (MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1451	1522	75.224			75.224	9116	9067	75	75.46	80
Acenaphthylene	1552	1477	0	0	9116	9067	85	85.11	81	81.42	5	4.82
Acenaphthene	1701	1534	666.58	666.58	9116	9067	57	56.73	48	47.82	17	17.14
Fluorene	1634	1437	440.217	440.217	9116	9067	65	65.46	55	54.95	17	16.67
Phenanthrene	5269	4783	7366.348	7366.348	9116	9067	-115	-115.05	-142	-142.44	0	21.01
Anthracene	2483	2252	1374.528	1374.528	9116	9067	61	60.78	48	48.39	24	23.85
Fluoranthene	9706	8624	11900.16	11900.16	9116	9067	-120	-120.33	-181	-180.69	0	40.53
Pyrene	8381	7830	11713.89	11713.89	9116	9067	-183	-182.81	-214	-214.15	0	15.62
Benzo (a) anthracene	5336	4848	5712.474	5712.474	9116	9067	-21	-20.66	-48	-47.65	0	78.26
Chrysene	5501	5710	7214.689	7214.689	9116	9067	-94	-94.00	-83	-82.96	0	12.43
Benzo (b) fluoranthene	7772	7331	10033.36	10033.36	9116	9067	-124	-124.02	-149	-149.01	0	18.32
Benzo (k) fluoranthene	3726	3547	3273.866	3273.866	9116	9067	25	24.78	15	15.08	50	50.00
Benzo (a) pyrene	6091	6274	6967.312	6967.312	9116	9067	-48	-48.06	-38	-38.26	0	23.26
Indeno (1,2,3-cd) pyrene	4971	5238	5567.803	5567.803	9116	9067	-33	-32.75	-18	-18.17	0	58.82
Dibenzo (a,h) anthracene	2461	2405	1136.602	1136.602	9116	9067	73	72.66	70	69.96	4	4.20
Benzo (g,h,i) perylene	6010	5983	6814.668	6814.668	9116	9067	-44	-44.11	-46	-45.88	0	4.44

Laboratory: Severn Trent

SDG: 247700
Sample ID: JPM3-ITF-AF6

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100 / (MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1568	1249	0			0	1922	1932	82	81.58	65
Acenaphthylene	1735	1503	0	0	1922	1932	90	90.29	78	77.77	14	14.29
Acenaphthene	1706	1515	0	0	1922	1932	89	88.75	78	78.41	13	13.17
Fluorene	1752	1573	0	0	1922	1932	91	91.15	81	81.39	12	11.63
Phenanthrene	1847	1550	0	0	1922	1932	96	96.12	80	80.22	18	18.18
Anthracene	1720	1637	0	0	1922	1932	89	89.47	85	84.71	5	4.60
Fluoranthene	1655	1615	0	0	1922	1932	86	86.09	84	83.59	2	2.35
Pyrene	1789	1706	0	0	1922	1932	93	93.06	88	88.28	6	5.52
Benzo (a) anthracene	1713	1590	0	0	1922	1932	89	89.15	82	82.31	8	8.19
Chrysene	1746	1638	0	0	1922	1932	91	90.83	85	84.79	7	6.82
Benzo (b) fluoranthene	1255	1231	0	0	1922	1932	65	65.32	64	63.71	2	1.55
Benzo (k) fluoranthene	1361	1164	0	0	1922	1932	71	70.81	60	60.25	17	16.79
Benzo (a) pyrene	1249	1107	0	0	1922	1932	65	64.97	57	57.30	13	13.11
Indeno (1,2,3-cd) pyrene	1312	1166	0	0	1922	1932	68	68.28	60	60.35	12	12.50
Dibenzo (a,h) anthracene	1308	1183	0	0	1922	1932	68	68.04	61	61.24	11	10.85
Benzo (g,h,i) perylene	1328	1198	0	0	1922	1932	69	69.12	62	62.01	11	10.69

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 247748
Sample ID: JPM3-ITF-AP8(1)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount addedRelative Percent Difference (RPD) = (MS - MSD) x 100
(MS + MSD) / 2Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1466	1331	0			0	2040	2046	72	71.86	65
Acenaphthylene	1613	1434	0	0	2040	2046	79	79.06	70	70.10	12	12.08
Acenaphthene	1636	1441	0	0	2040	2046	80	80.20	70	70.41	13	13.33
Fluorene	1883	1629	0	0	2040	2046	92	92.29	80	79.60	14	13.95
Phenanthrene	1917	1617	0	0	2040	2046	94	93.96	79	79.02	17	17.34
Anthracene	1808	1459	0	0	2040	2046	89	88.65	71	71.33	22	22.50
Fluoranthene	1730	1392	0	0	2040	2046	85	84.80	68	68.06	22	22.22
Pyrene	1741	1456	0	0	2040	2046	85	85.35	71	71.16	18	17.95
Benzo (a) anthracene	1696	1413	0	0	2040	2046	83	83.13	69	69.04	18	18.42
Chrysene	1710	1461	0	0	2040	2046	84	83.83	71	71.42	17	16.77
Benzo (b) fluoranthene	1486	1105	0	0	2040	2046	73	72.84	54	54.00	30	29.92
Benzo (k) fluoranthene	1434	1495	0	0	2040	2046	70	70.28	73	73.08	4	4.20
Benzo (a) pyrene	1287	1109	0	0	2040	2046	63	63.08	54	54.20	15	15.38
Indeno (1,2,3-cd) pyrene	1264	1042	0	0	2040	2046	62	61.98	51	50.94	19	19.47
Dibenzo (a,h) anthracene	1250	1034	0	0	2040	2046	61	61.28	51	50.55	18	17.86
Benzo (g,h,i) perylene	1278	1021	0	0	2040	2046	63	62.66	50	49.91	23	23.01

Laboratory: Severn TrentSDG: 247836
Sample ID: JPM3-ITF-AP16(1)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount addedRelative Percent Difference (RPD) = (MS - MSD) x 100
(MS + MSD) / 2Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1424	1359	0			0	1844	1920	77	77.23	71
Acenaphthylene	1494	1544	0	0	1844	1920	81	80.99	80	80.41	1	1.24
Acenaphthene	1553	1537	0	0	1844	1920	84	84.23	80	80.03	5	4.88
Fluorene	1482	1494	0	0	1844	1920	80	80.39	78	77.83	3	2.53
Phenanthrene	2198	1478	0	0	1844	1920	119	119.22	77	77.00	43	42.86
Anthracene	2274	1472	0	0	1844	1920	123	123.32	77	76.66	46	46.00
Fluoranthene	1883	1496	37.287	0	1844	1920	100	100.11	78	77.93	25	24.72
Pyrene	1984	1913	0	0	1844	1920	108	107.61	100	99.65	8	7.69
Benzo (a) anthracene	1439	881	0	0	1844	1920	78	78.06	46	45.88	52	51.61
Chrysene	1716	2597	0	0	1844	1920	93	93.06	135	135.24	37	36.84
Benzo (b) fluoranthene	1638	1588	0	0	1844	1920	89	88.85	83	82.70	7	6.98
Benzo (k) fluoranthene	1080	1198	0	0	1844	1920	59	58.55	62	62.37	5	4.96
Benzo (a) pyrene	1413	1315	0	0	1844	1920	77	76.65	68	68.48	12	12.41
Indeno (1,2,3-cd) pyrene	1851	1805	0	0	1844	1920	100	100.40	94	93.99	6	6.19
Dibenzo (a,h) anthracene	1853	1877	0	0	1844	1920	100	100.47	98	97.78	2	2.02
Benzo (g,h,i) perylene	2118	2051	0	0	1844	1920	115	114.87	107	106.81	7	7.21

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 3 of 17)

Laboratory: Severn TrentSDG: 247811
Sample ID: JPM3-ITF-AP13(1)D

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount addedRelative Percent Difference (RPD) = (MS - MSD) x 100
(MS + MSD) / 2Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1361	1341	0			0	1942	1924	70	70.10	70
Acenaphthylene	1701	1559	0	0	1942	1924	88	87.58	81	81.05	8	8.28
Acenaphthene	1646	1516	0	0	1942	1924	85	84.76	79	78.81	7	7.32
Fluorene	1657	1537	0	0	1942	1924	85	85.32	80	79.91	6	6.06
Phenanthrene	1691	1673	0	0	1942	1924	87	87.07	87	86.94	0	0.00
Anthracene	1677	1495	0	0	1942	1924	86	86.37	78	77.71	10	9.76
Fluoranthene	1778	1653	0	0	1942	1924	92	91.58	86	85.89	7	6.74
Pyrene	1686	1693	0	0	1942	1924	87	86.81	88	87.97	1	1.14
Benzo (a) anthracene	1639	1603	0	0	1942	1924	84	84.40	83	83.33	1	1.20
Chrysene	1616	1600	0	0	1942	1924	83	83.21	83	83.18	0	0.00
Benzo (b) fluoranthene	1787	1702	0	0	1942	1924	92	92.03	88	88.48	4	4.44
Benzo (k) fluoranthene	1390	1323	0	0	1942	1924	72	71.57	69	68.75	4	4.26
Benzo (a) pyrene	1561	1513	0	0	1942	1924	80	80.36	79	78.65	1	1.26
Indeno (1,2,3-cd) pyrene	1556	1471	0	0	1942	1924	80	80.13	76	76.45	5	5.13
Dibenzo (a,h) anthracene	1548	1449	0	0	1942	1924	80	79.73	75	75.31	6	6.45
Benzo (g,h,i) perylene	1671	1583	0	0	1942	1924	86	86.03	82	82.27	5	4.76

Laboratory: Severn TrentSDG: 247884
Sample ID: JPM3-ITF-AF64(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount addedRelative Percent Difference (RPD) = (MS - MSD) x 100
(MS + MSD) / 2Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1427	1482	0			0	2128	2083	67	67.06	71
Acenaphthylene	1553	1710	0	0	2128	2083	73	72.98	82	82.08	12	11.61
Acenaphthene	1608	1685	0	0	2128	2083	76	75.58	81	80.91	6	6.37
Fluorene	1569	1718	0	0	2128	2083	74	73.73	82	82.46	10	10.26
Phenanthrene	1629	1732	0	0	2128	2083	77	76.53	83	83.16	8	7.50
Anthracene	1612	1658	0	0	2128	2083	76	75.76	80	79.60	5	5.13
Fluoranthene	1809	1752	0	0	2128	2083	85	85.01	84	84.13	1	1.18
Pyrene	1624	1685	0	0	2128	2083	76	76.32	81	80.89	6	6.37
Benzo (a) anthracene	1575	1695	0	0	2128	2083	74	74.00	81	81.39	9	9.03
Chrysene	1551	1688	0	0	2128	2083	73	72.86	81	81.03	10	10.39
Benzo (b) fluoranthene	1690	1746	0	0	2128	2083	79	79.40	84	83.83	6	6.13
Benzo (k) fluoranthene	1201	1407	0	0	2128	2083	56	56.44	68	67.54	19	19.35
Benzo (a) pyrene	1440	1612	0	0	2128	2083	68	67.68	77	77.41	12	12.41
Indeno (1,2,3-cd) pyrene	1457	1518	0	0	2128	2083	68	68.48	73	72.89	7	7.09
Dibenzo (a,h) anthracene	1427	1494	0	0	2128	2083	67	67.08	72	71.72	7	7.19
Benzo (g,h,i) perylene	1547	1605	0	0	2128	2083	73	72.71	77	77.03	5	5.33

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 247904
Sample ID: JPM3-ITF-AF56(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1349	1300	0			0	2187	2215	62	61.67	59
Acenaphthylene	1596	1575	0	0	2187	2215	73	72.99	71	71.09	3	2.78
Acenaphthene	1599	1574	0	0	2187	2215	73	73.10	71	71.06	3	2.78
Fluorene	1705	1776	0	0	2187	2215	78	77.96	80	80.19	3	2.53
Phenanthrene	2013	2112	0	0	2187	2215	92	92.03	95	95.33	3	3.21
Anthracene	1806	1659	0	0	2187	2215	83	82.56	75	74.89	10	10.13
Fluoranthene	1843	1718	0	0	2187	2215	84	84.25	78	77.55	7	7.41
Pyrene	1698	1792	0	0	2187	2215	78	77.63	81	80.91	4	3.77
Benzo (a) anthracene	1784	1916	0	0	2187	2215	82	81.55	86	86.48	5	4.76
Chrysene	1754	1770	0	0	2187	2215	80	80.19	80	79.90	0	0.00
Benzo (b) fluoranthene	1799	1774	0	0	2187	2215	82	82.27	80	80.09	2	2.47
Benzo (k) fluoranthene	1406	1547	0	0	2187	2215	64	64.30	70	69.84	9	8.96
Benzo (a) pyrene	1648	1750	0	0	2187	2215	75	75.37	79	78.99	5	5.19
Indeno (1,2,3-cd) pyrene	1717	1777	0	0	2187	2215	79	78.52	80	80.23	1	1.26
Dibenzo (a,h) anthracene	1664	1714	0	0	2187	2215	76	76.10	77	77.37	1	1.31
Benzo (g,h,i) perylene	1843	1910	0	0	2187	2215	84	84.26	86	86.24	2	2.35

Laboratory: Severn Trent

SDG: 248048
Sample ID: JPM3-ITF-AP38(1)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1362	1107	0			0	2150	2130	63	63.36	52
Acenaphthylene	1551	1449	0	0	2150	2130	72	72.16	68	68.03	6	5.71
Acenaphthene	1572	1376	0	0	2150	2130	73	73.09	65	64.62	12	11.59
Fluorene	1698	1537	0	0	2150	2130	79	78.99	72	72.14	9	9.27
Phenanthrene	1901	1559	0	0	2150	2130	88	88.42	73	73.18	19	18.63
Anthracene	1623	1472	0	0	2150	2130	75	75.48	69	69.09	8	8.33
Fluoranthene	1683	1407	0	0	2150	2130	78	78.27	66	66.04	17	16.67
Pyrene	1485	1451	0	0	2150	2130	69	69.09	68	68.11	1	1.46
Benzo (a) anthracene	1489	1362	0	0	2150	2130	69	69.28	64	63.92	8	7.52
Chrysene	1540	1502	0	0	2150	2130	72	71.63	71	70.54	1	1.40
Benzo (b) fluoranthene	1792	1444	0	0	2150	2130	83	83.36	68	67.79	20	19.87
Benzo (k) fluoranthene	1497	1508	0	0	2150	2130	70	69.61	71	70.79	1	1.42
Benzo (a) pyrene	1597	1419	0	0	2150	2130	74	74.27	67	66.62	10	9.93
Indeno (1,2,3-cd) pyrene	1361	1249	0	0	2150	2130	63	63.31	59	58.62	7	6.56
Dibenzo (a,h) anthracene	1373	1263	0	0	2150	2130	64	63.85	59	59.29	8	8.13
Benzo (g,h,i) perylene	1356	1249	0	0	2150	2130	63	63.09	59	58.64	7	6.56

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 5 of 17)

Laboratory: Severn Trent

SDG: 248065
Sample ID: JPM3-ITF-AP44(1)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1140	1229	0			0	2086	2032	55	54.65	60
Acenaphthylene	1362	1372	0	0	2086	2032	65	65.30	68	67.54	5	4.51
Acenaphthene	1253	1320	0	0	2086	2032	60	60.05	65	64.96	8	8.00
Fluorene	1417	1480	0	0	2086	2032	68	67.93	73	72.84	7	7.09
Phenanthrene	1436	1506	0	0	2086	2032	69	68.85	74	74.12	7	6.99
Anthracene	1460	1563	0	0	2086	2032	70	69.97	77	76.90	10	9.52
Fluoranthene	1572	1581	0	0	2086	2032	75	75.38	78	77.79	4	3.92
Pyrene	1416	1475	0	0	2086	2032	68	67.90	73	72.59	7	7.09
Benzo (a) anthracene	1256	1262	0	0	2086	2032	60	60.23	62	62.11	3	3.28
Chrysene	1662	1624	0	0	2086	2032	80	79.70	80	79.91	0	0.00
Benzo (b) fluoranthene	1129	1400	0	0	2086	2032	54	54.11	69	68.87	24	24.39
Benzo (k) fluoranthene	1672	1577	0	0	2086	2032	80	80.13	78	77.61	3	2.53
Benzo (a) pyrene	1262	1276	0	0	2086	2032	61	60.51	63	62.80	3	3.23
Indeno (1,2,3-cd) pyrene	1391	1359	0	0	2086	2032	67	66.89	67	66.89	0	0.00
Dibenzo (a,h) anthracene	1325	1280	0	0	2086	2032	64	63.51	63	62.99	2	1.57
Benzo (g,h,i) perylene	1342	1414	0	0	2086	2032	64	64.31	70	69.59	9	8.96

Laboratory: Severn Trent

SDG: 248160
Sample ID: JPM3-ITF-AF99(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1476	1548	0			0	1983	2025	74	74.41	76
Acenaphthylene	1683	1769	0	0	1983	2025	85	84.88	87	87.35	2	2.33
Acenaphthene	1627	1718	0	0	1983	2025	82	82.06	85	84.84	4	3.59
Fluorene	1758	1814	0	0	1983	2025	89	88.63	90	89.57	1	1.12
Phenanthrene	1809	1867	0	0	1983	2025	91	91.23	92	92.19	1	1.09
Anthracene	1695	1723	0	0	1983	2025	85	85.49	85	85.08	0	0.00
Fluoranthene	1836	1870	0	0	1983	2025	93	92.58	92	92.37	1	1.08
Pyrene	1786	1797	0	0	1983	2025	90	90.04	89	88.74	1	1.12
Benzo (a) anthracene	1667	1789	0	0	1983	2025	84	84.05	88	88.34	5	4.65
Chrysene	1881	1774	0	0	1983	2025	95	94.88	88	87.62	8	7.65
Benzo (b) fluoranthene	1791	1827	0	0	1983	2025	90	90.34	90	90.20	0	0.00
Benzo (k) fluoranthene	1891	1954	0	0	1983	2025	95	95.36	96	96.49	1	1.05
Benzo (a) pyrene	1723	1780	0	0	1983	2025	87	86.87	88	87.90	1	1.14
Indeno (1,2,3-cd) pyrene	1661	1703	0	0	1983	2025	84	83.75	84	84.12	0	0.00
Dibenzo (a,h) anthracene	1832	1891	0	0	1983	2025	92	92.40	93	93.36	1	1.08
Benzo (g,h,i) perylene	1723	1767	0	0	1983	2025	87	86.87	87	87.27	0	0.00

ID - identification
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene
ug/kg - microgram per kilogram

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 6 of 17)

Laboratory: Severn TrentSDG: 248208
Sample ID: JPM3-ITF-AP50(1)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount addedRelative Percent Difference (RPD) = (MS - MSD) x 100
(MS + MSD) / 2Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1514	1173	0			0	1849	1848	82	81.88	63
Acenaphthylene	1671	1559	0	0	1849	1848	90	90.38	84	84.36	7	6.90
Acenaphthene	1645	1541	0	0	1849	1848	89	88.99	83	83.39	7	6.98
Fluorene	1728	1668	0	0	1849	1848	93	93.47	90	90.25	3	3.28
Phenanthrene	1824	1891	0	0	1849	1848	99	98.66	102	102.35	3	2.99
Anthracene	1586	1515	0	0	1849	1848	86	85.80	82	82.00	5	4.76
Fluoranthene	1842	1810	94.902	94.902	1849	1848	94	94.47	93	92.78	1	1.07
Pyrene	1912	1753	73.232	73.232	1849	1848	99	99.44	91	90.89	8	8.42
Benzo (a) anthracene	1768	1756	50.035	50.035	1849	1848	93	92.89	92	92.29	1	1.08
Chrysene	1958	1761	64.519	64.519	1849	1848	102	102.40	92	91.79	10	10.31
Benzo (b) fluoranthene	2015	2101	84.344	84.344	1849	1848	104	104.43	109	109.11	5	4.69
Benzo (k) fluoranthene	1942	1713	53.926	53.926	1849	1848	102	102.09	90	89.78	12	12.50
Benzo (a) pyrene	1731	1725	48.388	48.388	1849	1848	91	90.99	91	90.70	0	0.00
Indeno (1,2,3-cd) pyrene	1704	1695	0	0	1849	1848	92	92.14	92	91.72	0	0.00
Dibenzo (a,h) anthracene	1861	1874	0	0	1849	1848	101	100.64	101	101.40	0	0.00
Benzo (g,h,i) perylene	1787	1772	41.366	41.366	1849	1848	94	94.41	94	93.64	0	0.00

Laboratory: Severn TrentSDG: 248248
Sample ID: JPM3-ITF-AP60(1)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount addedRelative Percent Difference (RPD) = (MS - MSD) x 100
(MS + MSD) / 2Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1340	1342	0			0	1765	1700	76	75.91	79
Acenaphthylene	1451	1437	0	0	1765	1700	82	82.22	85	84.56	4	3.59
Acenaphthene	1401	1405	0	0	1765	1700	79	79.36	83	82.63	5	4.94
Fluorene	1488	1480	0	0	1765	1700	84	84.28	87	87.05	4	3.51
Phenanthrene	1948	1898	290.093	290.093	1765	1700	94	93.93	95	94.60	1	1.06
Anthracene	1552	1518	80.267	80.267	1765	1700	83	83.38	85	84.55	2	2.38
Fluoranthene	2171	2253	801.327	801.327	1765	1700	78	77.58	85	85.39	9	8.59
Pyrene	2130	2099	754.475	754.475	1765	1700	78	77.91	79	79.08	1	1.27
Benzo (a) anthracene	2067	1913	432.567	432.567	1765	1700	93	92.63	87	87.10	7	6.67
Chrysene	1915	1906	648.091	648.091	1765	1700	72	71.75	74	73.97	3	2.74
Benzo (b) fluoranthene	2385	2536	569.509	569.509	1765	1700	103	102.86	116	115.69	12	11.87
Benzo (k) fluoranthene	1700	1623	741.221	741.221	1765	1700	54	54.33	52	51.89	4	3.77
Benzo (a) pyrene	1913	1966	553.63	553.63	1765	1700	77	77.02	83	83.10	8	7.50
Indeno (1,2,3-cd) pyrene	1693	1716	397.375	397.375	1765	1700	73	73.41	78	77.54	7	6.62
Dibenzo (a,h) anthracene	1594	1681	125.19	125.19	1765	1700	83	83.19	92	91.51	10	10.29
Benzo (g,h,i) perylene	1784	1838	482.966	482.966	1765	1700	74	73.72	80	79.70	8	7.79

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 7 of 17)

Laboratory: Severn Trent

SDG: 248271
Sample ID: JPM3-ITF-AF125(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100
(MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1378	1119	0			0	1968	1990	70	70.01	56
Acenaphthylene	1585	1338	0	0	1968	1990	81	80.52	67	67.25	19	18.92
Acenaphthene	1549	1287	0	0	1968	1990	79	78.71	65	64.68	19	19.44
Fluorene	1605	1375	0	0	1968	1990	82	81.57	69	69.08	17	17.22
Phenanthrene	1668	1676	0	0	1968	1990	85	84.77	84	84.21	1	1.18
Anthracene	1657	1309	0	0	1968	1990	84	84.18	66	65.79	24	24.00
Fluoranthene	1628	1585	40.706	40.706	1968	1990	81	80.65	78	77.62	4	3.77
Pyrene	1903	1448	40.602	40.602	1968	1990	95	94.61	71	70.73	29	28.92
Benzo (a) anthracene	1822	1455	45.177	45.177	1968	1990	90	90.31	71	70.86	24	23.60
Chrysene	1750	1603	52.554	52.554	1968	1990	86	86.27	78	77.91	10	9.76
Benzo (b) fluoranthene	1885	1608	57.301	57.301	1968	1990	93	92.85	78	77.95	18	17.54
Benzo (k) fluoranthene	1867	1519	70.556	70.556	1968	1990	91	91.28	73	72.79	22	21.95
Benzo (a) pyrene	1748	1462	44.697	44.697	1968	1990	87	86.55	71	71.22	20	20.25
Indeno (1,2,3-cd) pyrene	1705	1441	0	0	1968	1990	87	86.61	72	72.40	19	18.87
Dibenzo (a,h) anthracene	1847	1572	0	0	1968	1990	94	93.87	79	79.00	17	17.34
Benzo (g,h,i) perylene	1819	1541	0	0	1968	1990	92	92.45	77	77.42	18	17.75

Laboratory: Severn Trent

SDG: 248327
Sample ID: JPM3-ITF-AP71(1)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100
(MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1187	1214	0			0	1829	1766	65	64.88	69
Acenaphthylene	1441	1384	0	0	1829	1766	79	78.81	78	78.39	1	1.27
Acenaphthene	1415	1361	0	0	1829	1766	77	77.36	77	77.07	0	0.00
Fluorene	1490	1419	0	0	1829	1766	81	81.46	80	80.35	1	1.24
Phenanthrene	1530	1422	0	0	1829	1766	84	83.64	81	80.53	4	3.64
Anthracene	1524	1381	0	0	1829	1766	83	83.35	78	78.23	6	6.21
Fluoranthene	1583	1459	0	0	1829	1766	87	86.56	83	82.64	5	4.71
Pyrene	1482	1427	0	0	1829	1766	81	81.02	81	80.82	0	0.00
Benzo (a) anthracene	1374	1267	0	0	1829	1766	75	75.10	72	71.75	4	4.08
Chrysene	1476	1377	0	0	1829	1766	71	80.72	78	77.97	4	9.40
Benzo (b) fluoranthene	1625	1393	0	0	1829	1766	89	88.87	79	78.87	12	11.90
Benzo (k) fluoranthene	1272	1184	0	0	1829	1766	70	69.56	67	67.06	4	4.38
Benzo (a) pyrene	1392	1240	0	0	1829	1766	76	76.10	70	70.20	8	8.22
Indeno (1,2,3-cd) pyrene	1541	1449	0	0	1829	1766	84	84.27	82	82.02	2	2.41
Dibenzo (a,h) anthracene	1567	1456	0	0	1829	1766	86	85.67	82	82.46	5	4.76
Benzo (g,h,i) perylene	1594	1489	0	0	1829	1766	87	87.15	84	84.29	4	3.51

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 8 of 17)

Laboratory: Severn Trent

SDG: 248423
Sample ID: JPM3-ITF-AF163(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1341	1449	0			0	1946	1993	69	68.93	73
Acenaphthylene	1507	1596	0	0	1946	1993	77	77.46	80	80.09	4	3.82
Acenaphthene	1490	1573	0	0	1946	1993	77	76.56	79	78.93	3	2.56
Fluorene	1783	1843	0	0	1946	1993	92	91.64	92	92.48	0	0.00
Phenanthrene	1733	1750	0	0	1946	1993	89	89.05	88	87.83	1	1.13
Anthracene	1020	1186	0	0	1946	1993	52	52.42	60	59.52	14	14.29
Fluoranthene	1300	1465	65.382	65.382	1946	1993	63	63.42	70	70.24	11	10.53
Pyrene	1413	1651	55.604	55.604	1946	1993	70	69.75	80	80.06	13	13.33
Benzo (a) anthracene	1501	1484	43.573	43.573	1946	1993	75	74.89	72	72.25	4	4.08
Chrysene	1453	1500	57.451	57.451	1946	1993	72	71.72	72	72.38	0	0.00
Benzo (b) fluoranthene	1507	1758	96.46	96.46	1946	1993	72	72.46	83	83.37	14	14.19
Benzo (k) fluoranthene	1593	1532	0	0	1946	1993	82	81.87	77	76.88	6	6.29
Benzo (a) pyrene	1498	1588	68.511	68.511	1946	1993	73	73.44	76	76.24	4	4.03
Indeno (1,2,3-cd) pyrene	1362	1489	43.488	43.488	1946	1993	68	67.77	73	72.53	7	7.09
Dibenzo (a,h) anthracene	1391	1494	0	0	1946	1993	72	71.50	75	74.95	4	4.08
Benzo (g,h,i) perylene	1385	1506	50.399	50.399	1946	1993	69	68.60	73	73.05	6	5.63

Laboratory: Severn Trent

SDG: 248439
Sample ID: JPM3-ITF-AF167(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1570	1616	0			0	1996	1975	79	78.68	82
Acenaphthylene	1725	1838	0	0	1996	1975	86	86.43	93	93.07	8	7.82
Acenaphthene	2668	1755	0	0	1996	1975	134	133.69	89	88.85	40	40.36
Fluorene	2139	2104	0	0	1996	1975	107	107.16	107	106.54	0	0.00
Phenanthrene	2106	1931	0	0	1996	1975	106	105.52	98	97.77	8	7.84
Anthracene	1723	1690	0	0	1996	1975	86	86.33	86	85.55	0	0.00
Fluoranthene	1855	1672	0	0	1996	1975	93	92.92	85	84.64	9	8.99
Pyrene	1838	2123	41.377	41.377	1996	1975	90	90.02	105	105.40	15	15.38
Benzo (a) anthracene	1596	1765	0	0	1996	1975	80	79.96	89	89.36	11	10.65
Chrysene	1626	1722	0	0	1996	1975	81	81.44	87	87.22	7	7.14
Benzo (b) fluoranthene	1656	1640	0	0	1996	1975	83	82.94	83	83.05	0	0.00
Benzo (k) fluoranthene	1398	1603	0	0	1996	1975	70	70.03	81	81.14	15	14.57
Benzo (a) pyrene	1573	1675	0	0	1996	1975	79	78.81	85	84.80	7	7.32
Indeno (1,2,3-cd) pyrene	1644	1762	0	0	1996	1975	82	82.35	89	89.24	8	8.19
Dibenzo (a,h) anthracene	1705	1830	0	0	1996	1975	85	85.44	93	92.65	9	8.99
Benzo (g,h,i) perylene	1708	1830	0	0	1996	1975	86	85.56	93	92.65	8	7.82

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 248981Sample ID: JPM3-ITF-AF186(2)-D

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1077	1116	0			0	2126	2220	51	50.65	50
Acenaphthylene	1494	1540	0	0	2126	2220	70	70.25	69	69.39	1	1.44
Acenaphthene	1429	1478	0	0	2126	2220	67	67.21	67	66.60	0	0.00
Fluorene	1413	1466	0	0	2126	2220	66	66.44	66	66.05	0	0.00
Phenanthrene	1430	1522	0	0	2126	2220	67	67.27	69	68.56	3	2.94
Anthracene	1438	1521	0	0	2126	2220	68	67.63	69	68.51	1	1.46
Fluoranthene	1493	1604	0	0	2126	2220	70	70.22	72	72.23	3	2.82
Pyrene	1672	1807	0	0	2126	2220	79	78.62	81	81.38	2	2.50
Benzo (a) anthracene	1473	1494	0	0	2126	2220	69	69.30	67	67.29	3	2.94
Chrysene	1414	1632	0	0	2126	2220	67	66.52	74	73.53	10	9.93
Benzo (b) fluoranthene	1528	1432	0	0	2126	2220	72	71.85	64	64.48	12	11.76
Benzo (k) fluoranthene	1343	1626	0	0	2126	2220	63	63.19	73	73.22	15	14.71
Benzo (a) pyrene	1363	1449	0	0	2126	2220	64	64.11	65	65.28	2	1.55
Indeno (1,2,3-cd) pyrene	1304	1405	0	0	2126	2220	61	61.33	63	63.29	3	3.23
Dibenzo (a,h) anthracene	1277	1374	0	0	2126	2220	60	60.07	62	61.88	3	3.28
Benzo (g,h,i) perylene	1422	1531	0	0	2126	2220	67	66.90	69	68.99	3	2.94

Laboratory: Severn TrentSDG: 249025Sample ID: JPM3-ITF-AF192(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1011	1116	0			0	2178	2185	46	46.41	51
Acenaphthylene	1455	1585	0	0	2178	2185	67	66.83	73	72.56	9	8.57
Acenaphthene	1412	1546	0	0	2178	2185	65	64.83	71	70.76	9	8.82
Fluorene	1438	1570	0	0	2178	2185	66	66.00	72	71.86	9	8.70
Phenanthrene	1667	1809	0	0	2178	2185	77	76.52	83	82.80	8	7.50
Anthracene	1417	1546	0	0	2178	2185	65	65.06	71	70.74	9	8.82
Fluoranthene	1535	1682	0	0	2178	2185	71	70.50	77	76.98	8	8.11
Pyrene	1722	1862	0	0	2178	2185	79	79.08	85	85.21	7	7.32
Benzo (a) anthracene	1599	1694	0	0	2178	2185	73	73.43	78	77.55	7	6.62
Chrysene	1592	1805	0	0	2178	2185	73	73.10	83	82.61	13	12.82
Benzo (b) fluoranthene	1461	1688	0	0	2178	2185	67	67.08	77	77.24	14	13.89
Benzo (k) fluoranthene	1441	1463	0	0	2178	2185	66	66.18	67	66.97	2	1.50
Benzo (a) pyrene	1403	1524	0	0	2178	2185	64	64.44	70	69.77	9	8.96
Indeno (1,2,3-cd) pyrene	1414	1546	0	0	2178	2185	65	64.93	71	70.77	9	8.82
Dibenzo (a,h) anthracene	1379	1502	0	0	2178	2185	63	63.29	69	68.74	9	9.09
Benzo (g,h,i) perylene	1568	1705	0	0	2178	2185	72	71.98	78	78.05	7	8.00

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn TrentSDG: 249072
Sample ID: JPM3-ITF-AF205(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1064	1102	0			0	1868	1896	57	56.98	58
Acenaphthylene	1316	1383	0	0	1868	1896	70	70.46	73	72.92	4	4.20
Acenaphthene	1279	1337	0	0	1868	1896	68	68.46	71	70.50	4	4.32
Fluorene	1238	1305	0	0	1868	1896	66	66.30	69	68.81	4	4.44
Phenanthrene	1323	1390	0	0	1868	1896	71	70.83	73	73.34	3	2.78
Anthracene	1191	1231	0	0	1868	1896	64	63.75	65	64.91	2	1.55
Fluoranthene	1241	1333	79.672	79.672	1868	1896	62	62.18	66	66.13	6	6.25
Pyrene	1438	1430	67.506	67.506	1868	1896	73	73.39	72	71.87	1	1.38
Benzo (a) anthracene	1332	1320	46.105	46.105	1868	1896	69	68.81	67	67.19	3	2.94
Chrysene	1263	1381	55.201	55.201	1868	1896	65	64.64	70	69.90	7	7.41
Benzo (b) fluoranthene	1301	1456	77.077	77.077	1868	1896	66	65.52	73	72.75	10	10.07
Benzo (k) fluoranthene	1175	1159	42.004	42.004	1868	1896	61	60.66	59	58.93	3	3.33
Benzo (a) pyrene	1167	1234	49.593	49.593	1868	1896	60	59.80	62	62.46	3	3.28
Indeno (1,2,3-cd) pyrene	1123	1199	41.53	41.53	1868	1896	58	57.92	61	61.03	5	5.04
Dibenzo (a,h) anthracene	1065	1126	11.396	11.396	1868	1896	57	56.38	59	58.79	3	3.45
Benzo (g,h,i) perylene	1228	1280	50.887	50.887	1868	1896	63	62.99	65	64.83	3	3.13

Laboratory: Severn TrentSDG: 249177
Sample ID: JPM3-ITF-AF217(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1527	1395	0			0	2347	2358	65	65.08	59
Acenaphthylene	1802	1590	0	0	2347	2358	77	76.76	67	67.45	14	13.89
Acenaphthene	1760	1539	0	0	2347	2358	75	75.01	65	65.29	14	14.29
Fluorene	1922	1723	0	0	2347	2358	82	81.89	73	73.06	12	11.61
Phenanthrene	2160	1969	0	0	2347	2358	92	92.02	84	83.49	9	9.09
Anthracene	1789	1636	0	0	2347	2358	76	76.22	69	69.38	10	9.66
Fluoranthene	1894	1763	0	0	2347	2358	81	80.69	75	74.77	8	7.69
Pyrene	1935	1909	0	0	2347	2358	82	82.44	81	80.95	1	1.23
Benzo (a) anthracene	2170	1973	0	0	2347	2358	92	92.48	84	83.68	9	9.09
Chrysene	1938	1802	0	0	2347	2358	83	82.57	76	76.40	9	8.81
Benzo (b) fluoranthene	1830	1843	0	0	2347	2358	78	77.98	78	78.16	0	0.00
Benzo (k) fluoranthene	2027	1793	0	0	2347	2358	86	86.35	76	76.05	12	12.35
Benzo (a) pyrene	1896	1806	0	0	2347	2358	81	80.79	77	76.61	5	5.06
Indeno (1,2,3-cd) pyrene	1889	1743	0	0	2347	2358	80	80.48	74	73.92	8	7.79
Dibenzo (a,h) anthracene	1872	1740	0	0	2347	2358	80	79.75	74	73.80	8	7.79
Benzo (g,h,i) perylene	2096	1927	0	0	2347	2358	89	89.31	82	81.71	8	8.19

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 249398
Sample ID: JPM3ITFCP1-5(1)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100
(MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1406	1285	0			0	1720	1690	82	81.77	76
Acenaphthylene	1472	1406	0	0	1720	1690	86	85.60	83	83.21	4	3.55
Acenaphthene	1468	1396	0	0	1720	1690	85	85.36	83	82.61	2	2.38
Fluorene	1557	1494	0	0	1720	1690	91	90.55	88	88.41	3	3.35
Phenanthrene	1485	1495	0	0	1720	1690	86	86.32	88	88.44	2	2.30
Anthracene	1503	1507	0	0	1720	1690	87	87.38	89	89.20	2	2.27
Fluoranthene	1410	1423	0	0	1720	1690	82	81.97	84	84.21	2	2.41
Pyrene	1684	1462	0	0	1720	1690	98	97.91	87	86.53	12	11.89
Benzo (a) anthracene	1462	1395	0	0	1720	1690	85	84.99	83	82.53	2	2.38
Chrysene	1731	1637	0	0	1720	1690	101	100.64	97	96.87	4	4.04
Benzo (b) fluoranthene	1542	1507	0	0	1720	1690	90	89.66	89	89.18	1	1.12
Benzo (k) fluoranthene	1480	1236	0	0	1720	1690	86	86.07	73	73.16	16	16.35
Benzo (a) pyrene	1491	1394	0	0	1720	1690	87	86.67	82	82.49	6	5.92
Indeno (1,2,3-cd) pyrene	1452	1445	0	0	1720	1690	84	84.41	85	85.51	1	1.18
Dibenzo (a,h) anthracene	1446	1464	0	0	1720	1690	84	84.10	87	86.61	4	3.51
Benzo (g,h,i) perylene	1540	1526	0	0	1720	1690	90	89.55	90	90.29	0	0.00

Laboratory: Severn Trent

SDG: 249439
Sample ID: JPM3-ITF-AF236(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100
(MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1666	1514	0			0	1990	2019	84	83.71	75
Acenaphthylene	1767	1591	0	0	1990	2019	89	88.81	79	78.78	12	11.90
Acenaphthene	1734	1563	0	0	1990	2019	87	87.12	77	77.41	12	12.20
Fluorene	1826	1346	0	0	1990	2019	92	91.77	67	66.65	31	31.45
Phenanthrene	2116	1890	378.792	378.792	1990	2019	87	87.31	75	74.87	15	14.81
Anthracene	1802	1622	113.222	113.222	1990	2019	85	84.89	75	74.74	12	12.50
Fluoranthene	2105	1771	940.23	940.23	1990	2019	59	58.52	41	41.15	36	36.00
Pyrene	2196	1863	805.172	805.172	1990	2019	70	69.87	52	52.40	30	29.51
Benzo (a) anthracene	2058	1825	494.232	494.232	1990	2019	79	78.57	66	65.90	18	17.93
Chrysene	2233	2031	512.934	512.934	1990	2019	86	86.43	75	75.18	14	13.66
Benzo (b) fluoranthene	2591	2110	580.42	580.42	1990	2019	101	101.05	76	75.77	28	28.25
Benzo (k) fluoranthene	1649	1536	311.816	311.816	1990	2019	67	67.17	61	60.63	9	9.38
Benzo (a) pyrene	2059	1761	437.201	437.201	1990	2019	82	81.51	66	65.58	22	21.62
Indeno (1,2,3-cd) pyrene	2081	1772	266.265	266.265	1990	2019	91	91.21	75	74.59	19	19.28
Dibenzo (a,h) anthracene	2033	1723	102.075	102.075	1990	2019	97	97.03	80	80.27	19	19.21
Benzo (g,h,i) perylene	2119	1806	305.722	305.722	1990	2019	91	91.11	74	74.28	21	20.61

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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SDG: 249240
Sample ID: JPM3-ITF-AF223(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100 / (MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1157	1194	0			0	2100	2139	55	55.11	56
Acenaphthylene	1451	1511	0	0	2100	2139	69	69.08	71	70.62	3	2.86
Acenaphthene	1438	1505	0	0	2100	2139	68	68.50	70	70.37	3	2.90
Fluorene	1619	1714	0	0	2100	2139	77	77.09	80	80.14	4	3.82
Phenanthrene	1933	2358	0	0	2100	2139	92	92.03	110	110.22	18	17.82
Anthracene	1402	1750	0	0	2100	2139	67	66.78	82	81.82	20	20.13
Fluoranthene	1583	1951	0	0	2100	2139	76	75.37	91	91.22	18	17.96
Pyrene	1494	1701	0	0	2100	2139	71	71.14	80	79.52	12	11.92
Benzo (a) anthracene	1745	1872	0	0	2100	2139	83	83.09	88	87.53	6	5.85
Chrysene	1603	1748	0	0	2100	2139	76	76.32	82	81.73	8	7.59
Benzo (b) fluoranthene	1497	1976	0	0	2100	2139	71	71.27	92	92.37	26	25.77
Benzo (k) fluoranthene	1370	1489	0	0	2100	2139	65	65.23	70	69.62	7	7.41
Benzo (a) pyrene	1612	1752	0	0	2100	2139	77	76.75	82	81.91	6	6.29
Indeno (1,2,3-cd) pyrene	1656	1767	0	0	2100	2139	79	78.86	83	82.61	5	4.94
Dibenzo (a,h) anthracene	1666	1772	0	0	2100	2139	79	79.32	83	82.82	5	4.94
Benzo (g,h,i) perylene	1807	1934	0	0	2100	2139	86	86.05	90	90.39	5	4.55

SDG: 249487
Sample ID: JPM3-ITF-AF244(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100 / (MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1412	950	0			0	2110	2039	67	66.94	47
Acenaphthylene	1542	1059	0	0	2110	2039	73	73.10	52	51.94	34	33.60
Acenaphthene	1544	1045	0	0	2110	2039	73	73.19	51	51.26	35	35.48
Fluorene	1453	1144	0	0	2110	2039	69	68.86	56	56.11	21	20.80
Phenanthrene	1927	1259	0	0	2110	2039	91	91.30	62	61.74	38	37.91
Anthracene	1635	1080	0	0	2110	2039	78	77.51	53	52.97	38	38.17
Fluoranthene	1837	1145	0	0	2110	2039	87	87.06	56	56.18	43	43.36
Pyrene	1802	1188	0	0	2110	2039	85	85.39	58	58.27	38	37.76
Benzo (a) anthracene	1767	1137	0	0	2110	2039	84	83.75	56	55.78	40	40.00
Chrysene	2070	1387	0	0	2110	2039	98	98.08	68	68.00	36	36.14
Benzo (b) fluoranthene	1784	1158	0	0	2110	2039	85	84.53	57	56.77	39	39.44
Benzo (k) fluoranthene	1867	1172	0	0	2110	2039	88	88.48	57	57.50	43	42.76
Benzo (a) pyrene	1776	1138	0	0	2110	2039	84	84.16	56	55.81	40	40.00
Indeno (1,2,3-cd) pyrene	1839	1157	0	0	2110	2039	87	87.18	57	56.76	42	41.67
Dibenzo (a,h) anthracene	1905	1155	0	0	2110	2039	90	90.27	57	56.64	45	44.90
Benzo (g,h,i) perylene	1904	1173	0	0	2110	2039	90	90.25	58	57.52	43	43.24

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 13 of 17)

SDG: 249944
Sample ID: JPM3-ITF-AP98(1)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100 / (MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1451	1199	0			0	2404	2358	60	60.37	51
Acenaphthylene	1697	1429	0	0	2404	2358	71	70.60	61	60.61	15	15.15
Acenaphthene	1752	1415	0	0	2404	2358	73	72.88	60	60.02	20	19.55
Fluorene	2129	1825	0	0	2404	2358	89	88.56	77	77.38	14	14.46
Phenanthrene	2043	1712	0	0	2404	2358	85	85.00	73	72.62	15	15.19
Anthracene	2066	1631	0	0	2404	2358	86	85.93	69	69.15	22	21.94
Fluoranthene	2062	1667	58.438	58.438	2404	2358	83	83.34	68	68.22	20	19.87
Pyrene	2081	1786	0	0	2404	2358	87	86.58	76	75.72	13	13.50
Benzo (a) anthracene	2164	1767	0	0	2404	2358	90	90.03	75	74.95	18	18.18
Chrysene	2038	1670	0	0	2404	2358	85	84.76	71	70.84	18	17.95
Benzo (b) fluoranthene	1593	1327	0	0	2404	2358	66	66.25	56	56.29	16	16.39
Benzo (k) fluoranthene	1944	1720	0	0	2404	2358	81	80.88	73	72.93	10	10.39
Benzo (a) pyrene	1764	1462	0	0	2404	2358	73	73.37	62	62.02	16	16.30
Indeno (1,2,3-cd) pyrene	1652	1366	0	0	2404	2358	69	68.71	58	57.93	17	17.32
Dibenzo (a,h) anthracene	1716	1419	0	0	2404	2358	71	71.37	60	60.17	17	16.79
Benzo (g,h,i) perylene	1779	1467	0	0	2404	2358	74	74.00	62	62.20	18	17.65

SDG: 250165
Sample ID: JPM3-ITF-AP255(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100 / (MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1120	859	0			0	2194	2145	51	51.05	40
Acenaphthylene	1388	1041	0	0	2194	2145	63	63.24	49	48.52	25	25.00
Acenaphthene	1443	1095	0	0	2194	2145	66	65.76	51	51.03	26	25.64
Fluorene	1500	1165	0	0	2194	2145	68	68.37	54	54.30	23	22.95
Phenanthrene	1456	1130	0	0	2194	2145	66	66.38	53	52.69	22	21.85
Anthracene	1474	1151	0	0	2194	2145	67	67.19	54	53.66	21	21.49
Fluoranthene	1480	1145	0	0	2194	2145	67	67.44	53	53.39	23	23.33
Pyrene	1384	1140	0	0	2194	2145	63	63.07	53	53.16	17	17.24
Benzo (a) anthracene	1299	1022	0	0	2194	2145	59	59.20	47	47.62	21	22.64
Chrysene	1397	1126	0	0	2194	2145	64	63.65	52	52.47	21	20.69
Benzo (b) fluoranthene	1239	969	0	0	2194	2145	56	56.46	45	45.17	22	21.78
Benzo (k) fluoranthene	1271	995	0	0	2194	2145	58	57.92	46	46.38	23	23.08
Benzo (a) pyrene	1192	950	0	0	2194	2145	54	54.31	44	44.27	20	20.41
Indeno (1,2,3-cd) pyrene	1123	914	0	0	2194	2145	51	51.18	43	42.60	17	17.02
Dibenzo (a,h) anthracene	1086	885	0	0	2194	2145	49	49.49	41	41.25	18	17.78
Benzo (g,h,i) perylene	1160	953	0	0	2194	2145	53	52.85	44	44.41	19	18.56

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 14 of 17)

SDG: 250183
Sample ID: JPM3-ITF-AP257(2)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1270	1308	0			0	2184	2181	58	58.15	60
Acenaphthylene	2046	2220	0	0	2184	2181	94	93.68	102	101.80	8	8.16
Acenaphthene	2161	2262	0	0	2184	2181	99	98.97	104	103.70	5	4.93
Fluorene	1948	1965	0	0	2184	2181	89	89.21	90	90.09	1	1.12
Phenanthrene	2562	2464	0	0	2184	2181	117	117.30	113	112.96	3	3.48
Anthracene	2042	2048	0	0	2184	2181	93	93.50	94	93.88	1	1.07
Fluoranthene	2384	2308	76.166	76.166	2184	2181	106	105.65	102	102.34	4	3.85
Pyrene	1171	1223	0	0	2184	2181	54	53.63	56	56.06	4	3.64
Benzo (a) anthracene	1592	1678	0	0	2184	2181	73	72.91	77	76.92	5	5.33
Chrysene	1642	1697	0	0	2184	2181	75	75.18	78	77.81	4	3.92
Benzo (b) fluoranthene	1734	1801	0	0	2184	2181	79	79.38	83	82.57	5	4.94
Benzo (k) fluoranthene	1415	1323	0	0	2184	2181	65	64.78	61	60.66	6	6.35
Benzo (a) pyrene	1739	1742	0	0	2184	2181	80	79.61	80	79.87	0	0.00
Indeno (1,2,3-cd) pyrene	1522	1390	0	0	2184	2181	70	69.67	64	63.72	9	8.96
Dibenzo (a,h) anthracene	1712	1643	0	0	2184	2181	78	78.39	75	75.32	4	3.92
Benzo (g,h,i) perylene	1820	1769	0	0	2184	2181	83	83.33	81	81.10	2	2.44

SDG: 250195
Sample ID: JPM3-ITF-AP103(1)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS - MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Naphthalene	1451	1299	0			0	2407	2365	60	60.29	55
Acenaphthylene	1727	1627	0	0	2407	2365	72	71.76	69	68.79	4	4.26
Acenaphthene	1712	1649	0	0	2407	2365	71	71.13	70	69.70	1	1.42
Fluorene	1804	1711	0	0	2407	2365	75	74.94	72	72.34	4	4.08
Phenanthrene	1745	1659	0	0	2407	2365	72	72.49	70	70.13	3	2.82
Anthracene	1730	1667	0	0	2407	2365	72	71.87	70	70.48	3	2.82
Fluoranthene	1792	1685	0	0	2407	2365	74	74.44	71	71.23	4	4.14
Pyrene	1726	1680	0	0	2407	2365	72	71.69	71	71.03	1	1.40
Benzo (a) anthracene	1583	1507	0	0	2407	2365	66	65.75	64	63.74	3	3.08
Chrysene	1618	1566	0	0	2407	2365	67	67.23	66	66.22	2	1.50
Benzo (b) fluoranthene	1487	1484	0	0	2407	2365	62	61.79	63	62.76	2	1.60
Benzo (k) fluoranthene	1600	1567	0	0	2407	2365	66	66.45	66	66.28	0	0.00
Benzo (a) pyrene	1469	1444	0	0	2407	2365	61	61.02	61	61.05	0	0.00
Indeno (1,2,3-cd) pyrene	1422	1291	0	0	2407	2365	59	59.08	55	54.60	7	7.02
Dibenzo (a,h) anthracene	1372	1249	0	0	2407	2365	57	57.01	53	52.82	7	7.27
Benzo (g,h,i) perylene	1489	1355	0	0	2407	2365	62	61.87	57	57.28	8	8.40

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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SDG: 500-4317
Sample ID: JPL2-AST-TF2(4)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Acenaphthene	1567	2013	280			280	2030	2020	63	63.39	85
Acenaphthylene	1540	1730	0	0	2030	2020	76	75.86	85	85.64	11	11.18
Anthracene	1360	1710	160	160	2030	2020	59	59.11	77	76.73	23	26.47
Benzo (a) anthracene	1160	1550	140	140	2030	2020	50	50.25	70	69.80	29	33.33
Benzo (a) pyrene	1290	1740	190	190	2030	2020	54	54.19	77	76.73	30	35.11
Benzo (b) fluoranthene	1400	1540	170	170	2030	2020	61	60.59	68	67.82	9	10.85
Benzo (g,h,i) perylene	1380	1680	210	210	2030	2020	58	57.64	72	72.77	20	21.54
Benzo (k) fluoranthene	1140	1990	170	170	2030	2020	48	47.78	90	90.10	54	60.87
Chrysene	1340	1770	130	130	2030	2020	60	59.61	81	81.19	28	29.79
Dibenzo (a,h) anthracene	1310	1660	0	0	2030	2020	65	64.53	82	82.18	24	23.13
Fluoranthene	1380	1640	0	0	2030	2020	68	67.98	81	81.19	17	17.45
Fluorene	1800	2220	710	710	2030	2020	54	53.69	75	74.75	21	32.56
Indeno (1,2,3-cd) pyrene	1300	1630	0	0	2030	2020	64	64.04	81	80.69	23	23.45
Naphthalene	1530	1910	0	0	2030	2020	76	75.37	95	94.55	22	22.22
Phenanthrene	1870	2220	670	670	2030	2020	59	59.11	77	76.73	17	26.47
Pyrene	1240	1640	130	130	2030	2020	55	54.68	74	74.75	28	29.46

SDG: 500-4472
Sample ID: JPL2-TP4(1)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) / (MS + MSD) x 100

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Acenaphthene	1600	1500	0			0	1760	1760	92	90.91	87
Acenaphthylene	1700	1600	0	0	1760	1760	95	96.59	93	90.91	2	2.13
Anthracene	1700	1500	0	0	1760	1760	95	96.59	86	85.23	9	9.94
Benzo (a) anthracene	1500	1400	0	0	1760	1760	83	85.23	81	79.55	4	2.44
Benzo (a) pyrene	1700	1600	0	0	1760	1760	98	96.59	94	90.91	5	4.17
Benzo (b) fluoranthene	1600	1600	0	0	1760	1760	91	90.91	89	90.91	2	2.22
Benzo (g,h,i) perylene	1800	1800	160	160	1760	1760	95	93.18	93	93.18	1	2.13
Benzo (k) fluoranthene	1800	1800	0	0	1760	1760	102	102.27	104	102.27	2	1.94
Chrysene	1700	1600	0	0	1760	1760	95	96.59	93	90.91	2	2.13
Dibenzo (a,h) anthracene	1500	1500	0	0	1760	1760	88	85.23	88	85.23	0	0.00
Fluoranthene	1700	1600	0	0	1760	1760	100	96.59	94	90.91	6	6.19
Fluorene	1600	1700	0	0	1760	1760	93	90.88	94	96.59	1	1.07
Indeno (1,2,3-cd) pyrene	1600	1600	0	0	1760	1760	92	90.91	90	90.91	3	2.20
Naphthalene	1500	1400	0	0	1760	1760	85	85.23	82	79.55	4	3.59
Phenanthrene	1800	1700	0	0	1760	1760	101	102.27	99	96.59	2	2.00
Pyrene	1600	1600	0	0	1760	1760	93	90.91	89	90.91	4	4.40

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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SDG: 500-5265
Sample ID: JPL5-PCN-3(3)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100
(MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Monochloronaphthalene	265	264	0			0	346	341	77	76.59	77
Dichloronaphthalene	323	352	87	87	346	341	68	68.21	78	77.71	8	13.70
Tetrachloronaphthalene	4440	5160	5000	5000	346	341	-165	-161.85	43	46.92	15	340.98
Octachloronaphthalene	298	298	0	0	346	341	86	86.13	87	87.39	0	1.16

SDG: 500-5285
Sample ID: JPL5-PCN-13(3)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Relative Percent Difference (RPD) = (MS – MSD) x 100
(MS + MSD) / 2

Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Monochloronaphthalene	299	289	0			0	347	347	86	86.17	83
Dichloronaphthalene	1050	974	0	0	347	347	302	302.59	280	280.69	7	7.56
Tetrachloronaphthalene	30900	29000	62000	62000	347	347	-8970	-8962.54	-9520	-9510.09	7	5.95
Octachloronaphthalene	330	320	0	0	347	347	95	95.10	92	92.22	3	3.21

Table F-5

PAH/PCN Matrix Spike/Matrix Spike Duplicate Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 17 of 17)

SDG: 500-14347
Sample ID: JPL5-RS-AP3(05)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount addedRelative Percent Difference (RPD) = (MS – MSD) x 100
(MS + MSD) / 2Where: MS = matrix spike result
MSD = matrix spike duplicate result

Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added (ug/kg)	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Acenaphthene	1390	1400	0			0	1830	1830	76	75.96	76
Acenaphthylene	1370	1370	0	0	1830	1830	75	74.86	75	74.86	0	0.00
Anthracene	1390	1360	0	0	1830	1830	76	75.96	74	74.32	2	2.67
Benzo (a) anthracene	1520	1440	0	0	1830	1830	83	83.06	79	78.69	5	4.94
Benzo (a) pyrene	1380	1430	0	0	1830	1830	75	75.41	78	78.14	4	3.92
Benzo (b) fluoranthene	1420	1380	0	0	1830	1830	77	77.60	75	75.41	3	2.63
Benzo (g,h,i) perylene	1510	1560	0	0	1830	1830	83	82.51	85	85.25	3	2.38
Benzo (k) fluoranthene	1350	1510	0	0	1830	1830	74	73.77	83	82.51	11	11.46
Chrysene	1690	1810	0	0	1830	1830	92	92.35	99	98.91	7	7.33
Dibenzo (a,h) anthracene	1370	1440	0	0	1830	1830	75	74.86	79	78.69	5	5.19
Fluoranthene	1490	1440	0	0	1830	1830	82	81.42	79	78.69	3	3.73
Fluorene	1770	1700	0	0	1830	1830	97	96.72	93	92.90	4	4.21
Indeno (1,2,3-cd) pyrene	1420	1480	0	0	1830	1830	78	77.60	81	80.87	4	3.77
Naphthalene	1330	1300	0	0	1830	1830	73	72.68	71	71.04	2	2.78
Phenanthrene	1570	1430	0	0	1830	1830	86	85.79	78	78.14	10	9.76
Pyrene	1420	1430	18	18	1830	1830	77	76.61	77	77.16	0	0.00

APPENDIX G

VALIDATION VERIFICATION WORKSHEETS-PCB

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 16)

Laboratory: STL/Test America
Calibration Date: 10-24/25-06SDG: 249563RF = $\frac{\text{peak Area}}{\text{Total Mass of Standard injected (in nanograms)}}$

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 1	Level 1	0.025	2200	88000	12.6	88000	12.6
	Level 2	0.04	3405	85125		85125	
	Level 3	0.25	17892	71568		71568	
	Level 4	0.5	34056	68112		68112	
	Level 5	0.75	51118	68157		68157	
	Level 6	1	66742	66742		66742	
Average CF				74617		74617	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 2	Level 1	0.025	6561	262440	7.1	262440	7.1
	Level 2	0.04	10345	258625		258625	
	Level 3	0.25	58521	234084		234084	
	Level 4	0.5	113210	226420		226420	
	Level 5	0.75	171541	228721		228721	
	Level 6	1	224261	224261		224261	
Average CF				239092		239092	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 3	Level 1	0.025	2569	102760	9.4	102760	9.4
	Level 2	0.04	4232	105800		105800	
	Level 3	0.25	22795	91180		91180	
	Level 4	0.5	43503	87006		87006	
	Level 5	0.75	65493	87324		87324	
	Level 6	1	85622	85622		85622	
Average CF				93282		93282	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 4	Level 1	0.025	1609	64360	7.3	64360	7.2
	Level 2	0.04	2756	68900		68900	
	Level 3	0.25	15218	60872		60872	
	Level 4	0.5	29151	58302		58302	
	Level 5	0.75	44138	58851		58851	
	Level 6	1	57174	57174		57174	
Average CF				61410		61410	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 5	Level 1	0.025	2183	87320	11.1	87320	11.1
	Level 2	0.04	3386	84650		84650	
	Level 3	0.25	19168	76672		76672	
	Level 4	0.5	35844	71688		71688	
	Level 5	0.75	51259	68345		68345	
	Level 6	1	67310	67310		67310	
Average CF				75998		75998	

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 1	Level 1	0.025	1372	54880	11.7	54880	11.7
	Level 2	0.04	2020	50500		50500	
	Level 3	0.25	11044	44176		44176	
	Level 4	0.5	21453	42906		42906	
	Level 5	0.75	31845	42460		42460	
	Level 6	1	41479	41479		41479	
Average CF				46067		46067	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 2	Level 1	0.025	1540	61600	9.3	61600	9.3
	Level 2	0.04	2296	57400		57400	
	Level 3	0.25	13047	52188		52188	
	Level 4	0.5	24964	49928		49928	
	Level 5	0.75	37421	49895		49895	
	Level 6	1	49494	49494		49494	
Average CF				53417		53417	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 3	Level 1	0.025	922	36880	8.0	36880	8.0
	Level 2	0.04	1398	34950		34900	
	Level 3	0.25	8486	33944		33944	
	Level 4	0.5	16199	32398		32398	
	Level 5	0.75	22813	30417		30417	
	Level 6	1	30095	30095		30095	
Average CF				33114		33106	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 4	Level 1	0.025	936	37440	8.0	37440	8.0
	Level 2	0.04	1412	35300		35300	
	Level 3	0.25	8419	33676		33676	
	Level 4	0.5	16131	32262		32262	
	Level 5	0.75	22934	30579		30579	
	Level 6	1	30906	30906		30906	
Average CF				33360		33360	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 5	Level 1	0.025	1880	75200	3.6	75200	3.6
	Level 2	0.04	2912	72800		72800	
	Level 3	0.25	18575	74300		74300	
	Level 4	0.5	36205	72410		72410	
	Level 5	0.75	51748	68997		68997	
	Level 6	1	69058	69058		69058	
Average CF				72128		72128	

CF - calibration factor
 PCB - polychlorinated biphenyl
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: STL/Test America
Calibration Date: 1/3/2007SDG: 250005RF = peak Area
Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 1	Level 1	0.025	376	15040	8.0	15040	8.0
	Level 2	0.04	596	14900		14900	
	Level 3	0.25	3994	15976		15976	
	Level 4	0.5	7094	14188		14188	
	Level 5	0.75	10221	13628		13628	
	Level 6	1	12721	12721		12721	
Average CF				14409		14409	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 2	Level 1	0.025	660	26400	8.1	26400	8.1
	Level 2	0.04	982	24550		24550	
	Level 3	0.25	6797	27188		27188	
	Level 4	0.5	12180	24360		24360	
	Level 5	0.75	17565	23420		23420	
	Level 6	1	21675	21675		21675	
Average CF				24599		24599	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 3	Level 1	0.025	557	22280	8.0	22280	8.0
	Level 2	0.04	824	20600		20600	
	Level 3	0.25	5231	20924		20924	
	Level 4	0.5	9822	19644		19644	
	Level 5	0.75	13680	18240		18240	
	Level 6	1	18196	18196		18196	
Average CF				19981		19981	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 4	Level 1	0.025	392	15680	4.3	15680	4.3
	Level 2	0.04	614	15350		15350	
	Level 3	0.25	4085	16340		16340	
	Level 4	0.5	7741	15482		15482	
	Level 5	0.75	11177	14903		14903	
	Level 6	1	14427	14427		14427	
Average CF				15364		15364	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 5	Level 1	0.025	346	13840	5.6	13840	5.6
	Level 2	0.04	535	13375		13375	
	Level 3	0.25	3430	13720		13720	
	Level 4	0.5	6395	12790		12790	
	Level 5	0.75	9411	12548		12548	
	Level 6	1	11952	11952		11952	
Average CF				13038		13038	

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 1	Level 1	0.025	1122	44880	6.5	44880	6.5
	Level 2	0.04	1733	43325		43325	
	Level 3	0.25	11494	45976		45976	
	Level 4	0.5	21253	42506		42506	
	Level 5	0.75	30246	40328		40328	
	Level 6	1	38586	38586		38586	
Average CF				42600		42600	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 2	Level 1	0.025	1247	49880	6.8	49880	6.8
	Level 2	0.04	1900	47500		47500	
	Level 3	0.25	13422	53688		53688	
	Level 4	0.5	24104	48208		48208	
	Level 5	0.75	34331	45775		45775	
	Level 6	1	44379	44379		44379	
Average CF				48238		48238	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 3	Level 1	0.025	999	39960	6.1	39960	6.1
	Level 2	0.04	1479	36975		36975	
	Level 3	0.25	10529	42116		42116	
	Level 4	0.5	19190	38380		38380	
	Level 5	0.75	28198	37597		37597	
	Level 6	1	35476	35476		35476	
Average CF				38417		38417	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 4	Level 1	0.025	885	35400	6.7	35400	6.7
	Level 2	0.04	1314	32850		32850	
	Level 3	0.25	9803	39212		39212	
	Level 4	0.5	17672	35344		35344	
	Level 5	0.75	25135	33513		33513	
	Level 6	1	33341	33341		33341	
Average CF				34943		34943	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 5	Level 1	0.025	1927	77080	8.8	77080	8.8
	Level 2	0.04	3057	76425		76425	
	Level 3	0.25	22904	91616		91616	
	Level 4	0.5	40131	80262		80262	
	Level 5	0.75	57187	76249		76249	
	Level 6	1	71181	71181		71181	
Average CF				78802		78802	

CF - calibration factor
 PCB - polychlorinated biphenyl
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: STL/Test America
Calibration Date: 1/8/2007SDG: 250012RF = peak Area

Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 1	Level 1	0.025	12059	482360	10.9	482360	10.9
	Level 2	0.04	18733	468325		468325	
	Level 3	0.25	111222	444888		444888	
	Level 4	0.5	202445	404890		404890	
	Level 5	0.75	284957	379943		379943	
	Level 6	1	372381	372381		372381	
Average CF				425464		425464	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 2	Level 1	0.025	37069	1482760	12.5	1482760	12.5
	Level 2	0.04	58996	1474900		1474900	
	Level 3	0.25	341717	1366868		1366868	
	Level 4	0.5	614946	1229892		1229892	
	Level 5	0.75	863231	1150975		1150975	
	Level 6	1	1105623	1105623		1105623	
Average CF				1301836		1301836	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 3	Level 1	0.025	15606	624240	12.3	624240	12.3
	Level 2	0.04	25406	635150		635150	
	Level 3	0.25	146845	587380		587380	
	Level 4	0.5	263180	526360		526360	
	Level 5	0.75	367300	489733		489733	
	Level 6	1	476639	476639		476639	
Average CF				556584		556584	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 4	Level 1	0.025	11096	443840	10.7	443840	10.7
	Level 2	0.04	15103	377575		377575	
	Level 3	0.25	94138	376552		376552	
	Level 4	0.5	174090	348180		348180	
	Level 5	0.75	254641	339521		339521	
	Level 6	1	338904	338904		338904	
Average CF				370762		370762	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 5	Level 1	0.025	12500	500000	5.0	500000	5.0
	Level 2	0.04	19382	484550		484550	
	Level 3	0.25	128351	513404		513404	
	Level 4	0.5	240017	480034		480034	
	Level 5	0.75	340814	454419		454419	
	Level 6	1	452425	452425		452425	
Average CF				480805		480805	

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 1	Level 1	0.025	29641	1185640	15.3	1185640	15.3
	Level 2	0.04	44392	1109800		1109800	
	Level 3	0.25	254490	1017960		1017960	
	Level 4	0.5	456606	913212		913212	
	Level 5	0.75	647313	863084		863084	
	Level 6	1	796190	796190		796190	
Average CF				980981		980981	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 2	Level 1	0.025	34500	1380000	10.3	1380000	10.3
	Level 2	0.04	52365	1309125		1309125	
	Level 3	0.25	312787	1251148		1251148	
	Level 4	0.5	574117	1148234		1148234	
	Level 5	0.75	843536	1124715		1124715	
	Level 6	1	1048624	1048624		1048624	
Average CF				1210308		1210308	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 3	Level 1	0.025	22968	918720	10.0	918720	10.0
	Level 2	0.04	34890	872250		872250	
	Level 3	0.25	212728	850912		850912	
	Level 4	0.5	386307	772614		772614	
	Level 5	0.75	569617	759489		759489	
	Level 6	1	702384	702384		702384	
Average CF				812728		812728	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 4	Level 1	0.025	22250	890000	11.0	890000	11.0
	Level 2	0.04	34175	854375		854375	
	Level 3	0.25	200793	803172		803172	
	Level 4	0.5	367116	734232		734232	
	Level 5	0.75	534017	712023		712023	
	Level 6	1	671579	671579		671579	
Average CF				777563		777563	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 5	Level 1	0.025	22625	905000	7.7	905000	7.7
	Level 2	0.04	34807	870175		870175	
	Level 3	0.25	211996	847984		847984	
	Level 4	0.5	406256	812512		812512	
	Level 5	0.75	590059	786745		786745	
	Level 6	1	728125	728125		728125	
Average CF				825090		825090	

CF - calibration factor
 PCB - polychlorinated biphenyl
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: STL/Test America
Calibration Date: 12-10-06/12-11-06

SDGs: 249966, 249972, 249981, and 249992

RF = peak Area
Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculated		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 1	Level 1	0.025	4485	179400	13.0	179400	13.0
	Level 2	0.04	7370	184250		184250	
	Level 3	0.25	38172	152688		152688	
	Level 4	0.5	72540	145080		145080	
	Level 5	0.75	104979	139972		139972	
	Level 6	1	137235	137235		137235	
Average CF				156438		156438	

Compound	Standard	Cs	As	Recalculated		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 2	Level 1	0.025	2547	101880	10.1	101880	10.1
	Level 2	0.04	4179	104475		104475	
	Level 3	0.25	22164	88656		88656	
	Level 4	0.5	43390	86780		86780	
	Level 5	0.75	63181	84241		84241	
	Level 6	1	83217	83217		83217	
Average CF				91542		91542	

Compound	Standard	Cs	As	Recalculated		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 3	Level 1	0.025	7964	318560	6.9	318560	6.9
	Level 2	0.04	13051	326275		326275	
	Level 3	0.25	73384	293536		293536	
	Level 4	0.5	143527	287054		287054	
	Level 5	0.75	210770	281027		281027	
	Level 6	1	276418	276418		276418	
Average CF				297145		297145	

Compound	Standard	Cs	As	Recalculated		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 4	Level 1	0.025	3322	132880	9.9	132880	9.9
	Level 2	0.04	5277	131925		131925	
	Level 3	0.25	28781	115124		115124	
	Level 4	0.5	56186	112372		112372	
	Level 5	0.75	81449	108599		108599	
	Level 6	1	106079	106079		106079	
Average CF				117830		117830	

Compound	Standard	Cs	As	Recalculated		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 5	Level 1	0.025	2434	97360	6.7	97360	6.7
	Level 2	0.04	4003	100075		100075	
	Level 3	0.25	22673	90692		90692	
	Level 4	0.5	44554	89108		89108	
	Level 5	0.75	64415	85887		85887	
	Level 6	1	85148	85148		85148	
Average CF				91378		91378	

CF - calibration factor
PCB - polychlorinated biphenyl
%RSD - percent relative standard deviation
SDG - sample delivery group

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 1	Level 1	0.025	1550	62000	8.8	62000	8.8
	Level 2	0.04	2586	64650		64650	
	Level 3	0.25	14132	56528		56528	
	Level 4	0.5	26964	53928		53928	
	Level 5	0.75	40371	53828		53828	
	Level 6	1	52073	52073		52073	
Average CF				57168		57168	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 2	Level 1	0.025	1776	71040	7.5	71040	7.4
	Level 2	0.04	2995	74875		74875	
	Level 3	0.25	16475	65900		65900	
	Level 4	0.5	31944	63888		63888	
	Level 5	0.75	47595	63460		63460	
	Level 6	1	62233	62233		62233	
Average CF				66899		66899	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 3	Level 1	0.025	1050	42000	6.0	42000	6.0
	Level 2	0.04	1752	43800		43800	
	Level 3	0.25	10017	40068		40068	
	Level 4	0.5	19440	38880		38880	
	Level 5	0.75	28503	38004		38004	
	Level 6	1	37620	37620		37620	
Average CF				40062		40062	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 4	Level 1	0.025	1066	42640	5.5	42640	5.5
	Level 2	0.04	1761	44025		44025	
	Level 3	0.25	10086	40344		40344	
	Level 4	0.5	19803	39606		39606	
	Level 5	0.75	29294	39059		39059	
	Level 6	1	38211	38211		38211	
Average CF				40647		40647	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 5	Level 1	0.025	2204	88160	3.5	88160	3.5
	Level 2	0.04	3758	93950		93950	
	Level 3	0.25	22639	90556		90556	
	Level 4	0.5	44238	88476		88476	
	Level 5	0.75	65045	86727		86727	
	Level 6	1	85008	85008		85008	
Average CF				88813		88813	

CF - calibration factor
 PCB - polychlorinated biphenyl
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: STL/Test America
Calibration Date: 6/14/2007SDG: 500-4792RF = peak Area

Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 1	Level 1	0.025	181	7240	11.8	7240	11.8
	Level 2	0.04	288	7200		7200	
	Level 3	0.25	2162	8648		8648	
	Level 4	0.5	4522	9044		9044	
	Level 5	0.75	7256	9675		9675	
	Level 6	1	8496	8496		8496	
Average CF				8384		8384	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 2	Level 1	0.025	315	12600	19.4	12600	19.4
	Level 2	0.04	535	13375		13375	
	Level 3	0.25	4503	18012		18012	
	Level 4	0.5	9373	18746		18746	
	Level 5	0.75	15704	20939		20939	
	Level 6	1	18536	18536		18536	
Average CF				17035		17035	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 3	Level 1	0.025	156	6240	12.1	6240	12.1
	Level 2	0.04	235	5875		5875	
	Level 3	0.25	1796	7184		7184	
	Level 4	0.5	3731	7462		7462	
	Level 5	0.75	6171	8228		8228	
	Level 6	1	7243	7243		7243	
Average CF				7039		7039	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 4	Level 1	0.025	161	6440	13.8	6440	13.8
	Level 2	0.04	251	6275		6275	
	Level 3	0.25	1974	7896		7896	
	Level 4	0.5	3907	7814		7814	
	Level 5	0.75	6727	8969		8969	
	Level 6	1	8234	8234		8234	
Average CF				7605		7605	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 5	Level 1	0.025	183	7320	14.2	7320	14.2
	Level 2	0.04	285	7125		7125	
	Level 3	0.25	2255	9020		9020	
	Level 4	0.5	4622	9244		9244	
	Level 5	0.75	7743	10324		10324	
	Level 6	1	9113	9113		9113	
Average CF				8691		8691	

CF - calibration factor
PCB - polychlorinated biphenyl
%RSD - percent relative standard deviation
SDG - sample delivery group

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 1	Level 1	0.025	479	19160	10.2	19160	10.2
	Level 2	0.04	716	17900		17900	
	Level 3	0.25	5541	22164		22164	
	Level 4	0.5	11200	22400		22400	
	Level 5	0.75	17337	23116		23116	
	Level 6	1	19646	19646		19646	
Average CF				20731		20731	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 2	Level 1	0.025	560	22400	8.9	22400	8.9
	Level 2	0.04	862	21550		21550	
	Level 3	0.25	6366	25464		25464	
	Level 4	0.5	13011	26022		26022	
	Level 5	0.75	20402	27203		27203	
	Level 6	1	25409	25409		25409	
Average CF				24675		24675	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 3	Level 1	0.025	525	21000	10.7	21000	10.7
	Level 2	0.04	766	19150		19150	
	Level 3	0.25	6078	24312		24312	
	Level 4	0.5	12203	24406		24406	
	Level 5	0.75	19241	25655		25655	
	Level 6	1	23819	23819		23819	
Average CF				23057		23057	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 4	Level 1	0.025	386	15440	12.6	15440	12.6
	Level 2	0.04	609	15225		15225	
	Level 3	0.25	4737	18948		18948	
	Level 4	0.5	9903	19806		19806	
	Level 5	0.75	15318	20424		20424	
	Level 6	1	19646	19646		19646	
Average CF				18248		18248	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 5	Level 1	0.025	954	38160	8.4	38160	8.4
	Level 2	0.04	1493	37325		37325	
	Level 3	0.25	11416	45664		45664	
	Level 4	0.5	21506	43012		43012	
	Level 5	0.75	33230	44307		44307	
	Level 6	1	44515	44515		44515	
Average CF				42164		42164	

CF - calibration factore
 PCB - polychlorinated biphenyl
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: STL/Test America
Calibration Date: 6/22/2007

SDG: 500-5265

RF = peak Area
Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 1	Level 1	0.025	863	34520	8.1	19880	8.0
	Level 2	0.04	1368	34200		19800	
	Level 3	0.25	7631	30524		17552	
	Level 4	0.5	14587	29174		17418	
	Level 5	0.75	22107	29476		16979	
	Level 6	1	29197	29197		29197	
Average CF				31182		31182	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 2	Level 1	0.025	708	28320	8.3		8.3
	Level 2	0.04	1139	28475			
	Level 3	0.25	6222	24888			
	Level 4	0.5	11985	23970			
	Level 5	0.75	18150	24200			
	Level 6	1	24176	24176		24176	
Average CF				25672		25672	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 3	Level 1	0.025	1964	78560	1.3		1.6
	Level 2	0.04	3139	78475			
	Level 3	0.25	19768	79072			
	Level 4	0.5	38290	76580			
	Level 5	0.75	58151	77535			
	Level 6	1	76921	76921		76921	
Average CF				77857		78065	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 4	Level 1	0.025	961	38440	6.0		6.0
	Level 2	0.04	1552	38800			
	Level 3	0.25	8780	35120			
	Level 4	0.5	16987	33974			
	Level 5	0.75	25863	34484			
	Level 6	1	34582	34582		34582	
Average CF				35900		35900	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 5	Level 1	0.025	868	34720	5.1		5.1
	Level 2	0.04	1394	34850			
	Level 3	0.25	7979	31916			
	Level 4	0.5	15635	31270			
	Level 5	0.75	23654	31539			
	Level 6	1	31690	31690		31690	
Average CF				32664		32664	

CF - calibration factore
PCB - polychlorinated biphenyl
%RSD - percent relative standard deviation
SDG - sample delivery group

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 1	Level 1	0.025	2056	82240	4.3	4.3	
	Level 2	0.04	3267	81675			
	Level 3	0.25	19547	78188			
	Level 4	0.5	37673	75346			
	Level 5	0.75	56349	75132			
	Level 6	1	74946	74946			74946
Average CF				77921		77921	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 2	Level 1	0.025	2469	98760	4.1	4.1	
	Level 2	0.04	3995	99875			
	Level 3	0.25	23629	94516			
	Level 4	0.5	46060	92120			
	Level 5	0.75	68708	91611			
	Level 6	1	90859	90859			90859
Average CF				94623		94623	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 3	Level 1	0.025	2655	106200	4.5	4.5	
	Level 2	0.04	4308	107700			
	Level 3	0.25	25332	101328			
	Level 4	0.5	49634	99268			
	Level 5	0.75	73139	97519			
	Level 6	1	96558	96558			96558
Average CF				101429		101429	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 4	Level 1	0.025	1829	73160	7.3	7.3	
	Level 2	0.04	2944	73600			
	Level 3	0.25	16600	66400			
	Level 4	0.5	33156	66312			
	Level 5	0.75	48027	64036			
	Level 6	1	61341	61341			61341
Average CF				67475		67475	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 5	Level 1	0.025	1888	75520	5.2	5.2	
	Level 2	0.04	3086	77150			
	Level 3	0.25	17979	71916			
	Level 4	0.5	35610	71220			
	Level 5	0.75	52423	69897			
	Level 6	1	66879	66879			66879
Average CF				72097		72097	

CF - calibration factor
 PCB - polychlorinated biphenyl
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: STL/Test America
Calibration Date: 7/10/2007SDG: 500-5265 and 500-5306RF = $\frac{\text{peak Area}}{\text{Total Mass of Standard injected (in nanograms)}}$

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 1	Level 1	0.025	307	12280	13.6	12280	13.6
	Level 2	0.04	485	12125		12125	
	Level 3	0.25	2641	10564		10564	
	Level 4	0.5	4975	9950		9950	
	Level 5	0.75	6764	9019		9019	
	Level 6	1	9135	9135		9135	
Average CF				10512		10512	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 2	Level 1	0.025	446	17840	10.8	17840	10.8
	Level 2	0.04	685	17125		17125	
	Level 3	0.25	3793	15172		15172	
	Level 4	0.5	7318	14636		14636	
	Level 5	0.75	10540	14053		14053	
	Level 6	1	13819	13819		13819	
Average CF				15441		15441	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 3	Level 1	0.025	291	11640	6.8	11640	6.8
	Level 2	0.04	447	11175		11175	
	Level 3	0.25	2718	10872		10872	
	Level 4	0.5	5230	10460		10460	
	Level 5	0.75	7491	9988		9988	
	Level 6	1	9749	9749		9749	
Average CF				10647		10647	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 4	Level 1	0.025	324	12960	13.1	12960	13.1
	Level 2	0.04	492	12300		12300	
	Level 3	0.25	2733	10932		10932	
	Level 4	0.5	5190	10380		10380	
	Level 5	0.75	7283	9711		9711	
	Level 6	1	9353	9353		9353	
Average CF				10939		10939	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 5	Level 1	0.025	428	17120	12.0	17120	12.0
	Level 2	0.04	610	15250		15250	
	Level 3	0.25	3602	14408		14408	
	Level 4	0.5	6613	13226		13226	
	Level 5	0.75	9784	13045		13045	
	Level 6	1	12577	12577		12577	
Average CF				14271		14271	

CF - calibration factor
PCB - polychlorinated biphenyl
%RSD - percent relative standard deviation
SDG - sample delivery group

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 1	Level 1	0.025	738	29520	13.0	29520	13.0
	Level 2	0.04	1120	28000		28000	
	Level 3	0.25	6145	24580		24580	
	Level 4	0.5	11938	23876		23876	
	Level 5	0.75	16394	21859		21859	
	Level 6	1	21565	21565		21565	
Average CF				24900		24900	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 2	Level 1	0.025	858	34320	12.1	34320	12.1
	Level 2	0.04	1251	31275		31275	
	Level 3	0.25	7132	28528		28528	
	Level 4	0.5	13643	27286		27286	
	Level 5	0.75	19284	25712		25712	
	Level 6	1	25336	25336		25336	
Average CF				28743		28743	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 3	Level 1	0.025	627	25080	12.0	25080	12.0
	Level 2	0.04	963	24075		24075	
	Level 3	0.25	5335	21340		21340	
	Level 4	0.5	10425	20850		20850	
	Level 5	0.75	14352	19136		19136	
	Level 6	1	18728	18728		18728	
Average CF				21535		21535	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 4	Level 1	0.025	636	25440	11.4	25440	11.4
	Level 2	0.04	967	24175		24175	
	Level 3	0.25	5477	21908		21908	
	Level 4	0.5	10520	21040		21040	
	Level 5	0.75	14821	19761		19761	
	Level 6	1	19018	19018		19018	
Average CF				21890		21890	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 5	Level 1	0.025	904	36160	8.3	36160	8.3
	Level 2	0.04	1436	35900		35900	
	Level 3	0.25	8265	33060		33060	
	Level 4	0.5	16654	33308		33308	
	Level 5	0.75	23459	31279		31279	
	Level 6	1	28940	28940		28940	
Average CF				33108		33108	

CF - calibration factore
 PCB - polychlorinated biphenyl
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: STL/Test America
Calibration Date: 8/10/2007SDG: 500-5933RF = peak Area

Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 1	Level 1	0.025	1237	49480	15.5	49480	15.5
	Level 2	0.04	2008	50200		50200	
	Level 3	0.25	10639	42556		42556	
	Level 4	0.5	19615	39230		39230	
	Level 5	0.75	27054	36072		36072	
	Level 6	1	35155	35155		35155	
Average CF				42116		42116	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 2	Level 1	0.025	1005	40200	13.6	40200	13.5
	Level 2	0.04	1642	41050		41050	
	Level 3	0.25	8704	34816		34816	
	Level 4	0.5	16257	32514		32514	
	Level 5	0.75	23209	30945		30945	
	Level 6	1	29925	29925		29925	
Average CF				34908		34908	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 3	Level 1	0.025	2853	114120	11.9	114120	11.8
	Level 2	0.04	4766	119150		119150	
	Level 3	0.25	26938	107752		107752	
	Level 4	0.5	49424	98848		98848	
	Level 5	0.75	68934	91912		91912	
	Level 6	1	88599	88599		88599	
Average CF				103397		103397	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 4	Level 1	0.025	1357	54280	11.7	54280	11.6
	Level 2	0.04	2246	56150		56150	
	Level 3	0.25	12426	49704		49704	
	Level 4	0.5	22886	45772		45772	
	Level 5	0.75	32768	43691		43691	
	Level 6	1	42357	42357		42357	
Average CF				48659		48659	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1016 peak 5	Level 1	0.025	1277	51080	11.1	51080	11.0
	Level 2	0.04	2084	52100		52100	
	Level 3	0.25	11614	46456		46456	
	Level 4	0.5	21502	43004		43004	
	Level 5	0.75	30764	41019		41019	
	Level 6	1	40409	40409		40409	
Average CF				45678		45678	

CF - calibration factor
 PCB - polychlorinated biphenyl
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table G-1

PCB Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 1	Level 1	0.025	3153	126120	14.0	126120	13.9
	Level 2	0.04	5148	128700		128700	
	Level 3	0.25	28075	112300		112300	
	Level 4	0.5	51246	102492		102492	
	Level 5	0.75	71339	95119		95119	
	Level 6	1	93285	93285		93285	
Average CF				109669		109669	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 2	Level 1	0.025	3732	149280	14.6	149280	14.6
	Level 2	0.04	6303	157575		157575	
	Level 3	0.25	34782	139128		139128	
	Level 4	0.5	63650	127300		127300	
	Level 5	0.75	88204	117605		117605	
	Level 6	1	106414	106414		106414	
Average CF				132884		132884	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 3	Level 1	0.025	4020	160800	15.7	160800	15.7
	Level 2	0.04	6683	167075		167075	
	Level 3	0.25	37423	149692		149692	
	Level 4	0.5	68904	137808		137808	
	Level 5	0.75	97023	129364		129364	
	Level 6	1	106422	106422		106422	
Average CF				141860		141860	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 4	Level 1	0.025	2854	114160	12.0	114160	12.0
	Level 2	0.04	4823	120575		120575	
	Level 3	0.25	26876	107504		107504	
	Level 4	0.5	49138	98276		98276	
	Level 5	0.75	68990	91987		91987	
	Level 6	1	89497	89497		89497	
Average CF				103666		103666	

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
Aroclor 1260 peak 5	Level 1	0.025	3130	125200	11.4	125200	11.3
	Level 2	0.04	5160	129000		129000	
	Level 3	0.25	28826	115304		115304	
	Level 4	0.5	53262	106524		106524	
	Level 5	0.75	76435	101913		101913	
	Level 6	1	97429	97429		97429	
Average CF				112562		112562	

CF - calibration factore
 PCB - polychlorinated biphenyl
 %RSD - percent relative standard deviation
 SDG - sample delivery group

Table G-2

PCB Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: STL/Test America
Calibration Date: 1-10-07 @0521

SDG: 250005

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
Arochlor 1016 -peak 1	0.5	7665	15330	15330	14409	6.4	6.4
Arochlor 1016-peak 2	0.5	13788	27576	27576	24599	12.1	12.1
Arochlor 1016-peak 3	0.5	10091	20182	20182	19981	1.0	1.0
Arochlor 1016-peak 4	0.5	8620	17240	17240	15364	12.2	12.2
Arochlor 1016-peak 5	0.5	6754	13508	13508	13038	3.6	3.6
Arochlor 1260 -peak 1	0.5	20965	41930	41930	42600	1.6	1.6
Arochlor 1260-peak 2	0.5	23252	46504	46504	48238	3.6	3.6
Arochlor 1260-peak 3	0.5	18601	37202	37202	38417	3.2	3.2
Arochlor 1260-peak 4	0.5	18222	36444	36444	34943	4.3	4.3
Arochlor 1260-peak 5	0.5	41554	83108	83108	78802	5.5	5.5

Laboratory: STL/Test America
Calibration Date: 1-10-07 @ 2120

SDG: 250012

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
Arochlor 1016 -peak 1	0.5	215120	430240	430240	425464	1.1	1.1
Arochlor 1016-peak 2	0.5	669380	1338760	1338760	1301836	2.8	2.8
Arochlor 1016-peak 3	0.5	286043	572086	572086	556584	2.8	2.8
Arochlor 1016-peak 4	0.5	190568	381136	381136	370762	2.8	2.8
Arochlor 1016-peak 5	0.5	252941	505882	505882	480805	5.2	5.2
Arochlor 1260 -peak 1	0.5	495988	991976	991976	980981	1.1	1.1
Arochlor 1260-peak 2	0.5	616188	1232376	1232376	1210308	1.8	1.8
Arochlor 1260-peak 3	0.5	419721	839442	839442	812728	3.3	3.3
Arochlor 1260-peak 4	0.5	390241	780482	780482	777563	0.4	0.4
Arochlor 1260-peak 5	0.5	418601	837202	837202	825090	1.5	1.5

CCV - continuing calibration verification
%D - percent difference
D or meanD<=15% with max %D<30%
PCB - polychlorinated biphenyl

Table G-2

PCB Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 6)

Laboratory: STL/Test America
Calibration Date: 11-16-06 @1648

SDG: 249563

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
Arochlor 1016 -peak 1	0.25	17878	71512	71512	74617	4.2	4.2
Arochlor 1016-peak 2	0.25	58034	232136	232136	239092	2.9	2.9
Arochlor 1016-peak 3	0.25	22772	91088	91088	93282	2.4	2.4
Arochlor 1016-peak 4	0.25	14901	59604	59604	61410	2.9	2.9
Arochlor 1016-peak 5	0.25	20344	81376	81376	75998	7.1	7.1
Arochlor 1260 -peak 1	0.25	11140	44560	44560	46067	3.3	3.3
Arochlor 1260-peak 2	0.25	13294	53176	53176	53417	0.5	0.4
Arochlor 1260-peak 3	0.25	9403	37612	37612	33106	13.6	13.6
Arochlor 1260-peak 4	0.25	9080	36320	36320	33360	8.9	8.9
Arochlor 1260-peak 5	0.25	19945	79780	79780	72128	10.6	10.6

Laboratory: STL/Test America
Calibration Date: 1-4-07 @0044

SDG: 249966

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
Arochlor 1016 -peak 1	0.5	71361	142722	142722	156438	8.8	8.8
Arochlor 1016-peak 2	0.5	41963	83926	83926	91542	8.3	8.3
Arochlor 1016-peak 3	0.5	139612	279224	279224	297145	6.0	6.0
Arochlor 1016-peak 4	0.5	54833	109666	109666	117831	6.9	6.9
Arochlor 1016-peak 5	0.5	49732	99464	99464	91378	8.8	8.8
Arochlor 1260 -peak 1	0.5	27534	55068	55068	57168	3.7	3.7
Arochlor 1260-peak 2	0.5	32819	65638	65638	66899	1.9	1.9
Arochlor 1260-peak 3	0.5	23035	46070	46070	40062	15.0	15.0
Arochlor 1260-peak 4	0.5	21871	43742	43742	40647	7.6	7.6
Arochlor 1260-peak 5	0.5	49771	99542	99542	88813	12.1	12.1

CCV - continuing calibration verification
%D - percent difference
D or meanD<=15% with max %D<30%
PCB - polychlorinated biphenyl

Table G-2

PCB Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 3 of 6)

Laboratory: STL/Test America
Calibration Date: 1/4/07 @1014

SDG: 249972

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
Arochlor 1016 -peak 1	0.5	70073	140146	140146	156438	10.4	10.4
Arochlor 1016-peak 2	0.5	41281	82562	82562	91542	9.8	9.8
Arochlor 1016-peak 3	0.5	135133	270266	270266	297145	9.0	9.0
Arochlor 1016-peak 4	0.5	51528	103056	103056	117830	12.5	12.5
Arochlor 1016-peak 5	0.5	48641	97282	97282	91378	6.5	6.5
Arochlor 1260 -peak 1	0.5	26042	52084	52084	57168	8.9	8.9
Arochlor 1260-peak 2	0.5	30968	61936	61936	66899	7.4	7.4
Arochlor 1260-peak 3	0.5	21139	42278	42278	40062	5.5	5.5
Arochlor 1260-peak 4	0.5	20019	40038	40038	40647	1.5	1.5
Arochlor 1260-peak 5	0.5	45310	90620	90620	88813	2.0	2.0

Laboratory: STL/Test America
Calibration Date: 1/8/07 at 1104

SDG: 249981

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
Arochlor 1016 -peak 1	0.5	71861	143722	143722	156438	8.1	8.1
Arochlor 1016-peak 2	0.5	42406	84812	84812	91542	7.4	7.4
Arochlor 1016-peak 3	0.5	141642	283284	283284	297145	4.7	4.7
Arochlor 1016-peak 4	0.5	54796	109592	109592	117830	7.0	7.0
Arochlor 1016-peak 5	0.5	49961	99922	99922	91378	9.4	9.4
Arochlor 1260 -peak 1	0.5	27786	55572	55572	57168	2.8	2.8
Arochlor 1260-peak 2	0.5	33327	66654	66654	66899	0.4	0.4
Arochlor 1260-peak 3	0.5	23358	46716	46716	40062	16.6	16.6
Arochlor 1260-peak 4	0.5	21795	43590	43590	40647	7.2	7.2
Arochlor 1260-peak 5	0.5	50033	100066	100066	88813	12.7	12.7

CCV - continuing calibration verification
%D - percent difference
D or meanD<=15% with max %D<30%
PCB - polychlorinated biphenyl

Table G-2

PCB Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 4 of 6)

Laboratory: STL/Test America
Calibration Date: 1/7/07 @ 0832

SDG: 249992

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
Arochlor 1016 -peak 1	0.5	70328	140656	140656	156438	10.1	10.1
Arochlor 1016-peak 2	0.5	41415	82830	82830	91542	9.5	9.5
Arochlor 1016-peak 3	0.5	138203	276406	276406	297145	7.0	7.0
Arochlor 1016-peak 4	0.5	53496	106992	106992	117830	9.2	9.2
Arochlor 1016-peak 5	0.5	48922	97844	97844	91378	7.1	7.1
Arochlor 1260 -peak 1	0.5	27133	54266	54266	57168	5.1	5.1
Arochlor 1260-peak 2	0.5	32130	64260	64260	66899	3.9	3.9
Arochlor 1260-peak 3	0.5	22321	44642	44642	40062	11.4	11.4
Arochlor 1260-peak 4	0.5	21320	42640	42640	40647	4.9	4.9
Arochlor 1260-peak 5	0.5	48025	96050	96050	88813	8.1	8.1

Laboratory: STL/Test America
Calibration Date: 6/19/2007 @2312

SDG: 500-4792

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
Arochlor 1016 -peak 1	0.5	4350	8700	8700	8384	3.8	3.8
Arochlor 1016-peak 2	0.5	9541	19082	19082	17035	12.0	12.0
Arochlor 1016-peak 3	0.5	3783	7566	7566	7039	7.5	7.5
Arochlor 1016-peak 4	0.5	4041	8082	8082	7605	6.3	6.3
Arochlor 1016-peak 5	0.5	4492	8984	8984	8691	3.4	3.4
Arochlor 1260 -peak 1	0.5	10555	21110	21110	21070	0.2	0.2
Arochlor 1260-peak 2	0.5	13330	26660	26660	24675	8.0	8.0
Arochlor 1260-peak 3	0.5	11900	23800	23800	23057	3.2	3.2
Arochlor 1260-peak 4	0.5	9524	19048	19048	18248	4.4	4.4
Arochlor 1260-peak 5	0.5	21842	43684	43684	42164	3.6	3.6

CCV - continuing calibration verification
%D - percent difference
D or meanD<=15% with max %D<30%
PCB - polychlorinated biphenyl

Table G-2

PCB Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 5 of 6)

Laboratory: STL/Test America
Calibration Date: 6/27/2007 @ 1328

SDG: 500-4954

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
Arochlor 1016 -peak 1	0.5	15061	30122	30122	31182	3.4	3.4
Arochlor 1016-peak 2	0.5	12469	24938	24938	25672	2.9	2.8
Arochlor 1016-peak 3	0.5	39478	78956	78956	78065	1.1	1.1
Arochlor 1016-peak 4	0.5	17806	35612	35612	35900	0.8	0.8
Arochlor 1016-peak 5	0.5	16108	32216	32216	32664	1.4	1.4
Arochlor 1260 -peak 1	0.5	38561	77122	77122	77921	1.0	1.0
Arochlor 1260-peak 2	0.5	48189	96378	96378	94623	1.9	1.8
Arochlor 1260-peak 3	0.5	51426	102852	102852	101429	1.4	1.4
Arochlor 1260-peak 4	0.5	35017	70034	70034	67475	3.8	3.8
Arochlor 1260-peak 5	0.5	38083	76166	76166	72097	5.6	5.6

Laboratory: STL/Test America
Calibration Date: 7-17-07 @ 1307

SDG: 500-5265

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
Arochlor 1016 -peak 1	0.5	4350	8700	8700	10512	17.2	17.2
Arochlor 1016-peak 2	0.5	6541	13082	13082	15441	15.3	15.3
Arochlor 1016-peak 3	0.5	4796	9592	9592	10647	9.9	9.9
Arochlor 1016-peak 4	0.5	4819	9638	9638	10939	11.9	11.9
Arochlor 1016-peak 5	0.5	6177	12354	12354	14271	13.4	13.4
Arochlor 1260 -peak 1	0.5	11421	22842	22842	24900	8.3	8.3
Arochlor 1260-peak 2	0.5	12882	25764	25764	28743	10.4	10.4
Arochlor 1260-peak 3	0.5	10353	20706	20706	21535	3.8	3.8
Arochlor 1260-peak 4	0.5	10593	21186	21186	21890	3.2	3.2
Arochlor 1260-peak 5	0.5	17030	34060	34060	33108	2.9	2.9

CCV - continuing calibration verification
%D - percent difference
D or meanD<=15% with max %D<30%
PCB - polychlorinated biphenyl

Table G-2

PCB Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 6 of 6)

Laboratory: STL/Test America
Calibration Date: 7-18-07 @ 1239

SDG: 500-5306

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
Arochlor 1016 -peak 1	0.5	4500	9000	9000	10512	14.4	14.4
Arochlor 1016-peak 2	0.5	6998	13996	13996	15441	9.4	9.4
Arochlor 1016-peak 3	0.5	5020	10040	10040	10647	5.7	5.7
Arochlor 1016-peak 4	0.5	5066	10132	10132	10939	7.4	7.4
Arochlor 1016-peak 5	0.5	6505	13010	13010	14271	8.8	8.8
Arochlor 1260 -peak 1	0.5	11539	23078	23078	24900	7.3	7.3
Arochlor 1260-peak 2	0.5	15200	30400	30400	28743	5.8	5.8
Arochlor 1260-peak 3	0.5	10785	21570	21570	21535	0.2	0.2
Arochlor 1260-peak 4	0.5	10696	21392	21392	21890	2.3	2.3
Arochlor 1260-peak 5	0.5	17108	34216	34216	33108	3.3	3.3

CCV - continuing calibration verification
%D - percent difference
D or meanD<=15% with max %D<30%
PCB - polychlorinated biphenyl

Table G-3

PCB Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 2)

Laboratory: STL/Test America

SDG: SEE BELOW

Percent recovery (%R) = SF/SS x 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID:	SDG	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
				%R	%R	Y/N
JPL5-I1(1)	250005	0.4	0.4111	103	104	Y
JPL5-I2(1)	250005	0.4	0.4308	108	107	Y
JPL5-I3(1)	250005	0.4	0.4093	102	102	Y
JPL5-I4(1)	250005	0.4	0.576	144	143	Y
JPL5-I5(1)	250005	0.4	0.4903	123	122	Y
JPL5-J1(1)	250005	0.4	0.4037	101	100	Y
JPL5-J2(1)	250005	0.4	0.6427	161	160	Y
JPL5-J3(1)	250005	0.4	0.3959	99	98	Y
JPL5-J4(1)	250005	0.4	0.482	121	120	Y
JPL5-J5(1)	250005	0.4	0.4306	108	107	Y
JPL5-K1(1)	250012	0.4	0.3981	100	99	Y
JPL5-K2(1)	250012	0.4	0.4034	101	100	Y
JPL5-K3(1)	250012	0.4	0.4178	104	104	Y
JPL5-K4(1)	250012	0.4	0.4155	104	103	Y
JPL5-K5(1)	250012	0.4	0.4093	102	102	Y
JPL5-L1(1)	250012	0.4	0.416	104	103	Y
JPL5-L2(1)	250012	0.4	D	D	D	Y
JPL5-L3(1)	250012	0.4	D	D	D	Y
JPL5-L4(1)	250012	0.4	D	D	D	Y
JPL5-L5(1)	250012	0.4	D	D	D	Y
JPL5-A1(1)	249966	0.4	D	D	D	Y
JPL5-A2(1)	249966	0.4	D	D	D	Y
JPL5-A3(1)	249966	0.4	D	D	D	Y
JPL5-A4(1)	249966	0.4	D	D	D	Y
JPL5-A5(1)	249966	0.4	D	D	D	Y
JPL5-B1(1)	249966	0.4	D	D	D	Y
JPL5-B2(1)	249966	0.4	D	D	D	Y
JPL5-B3(1)	249966	0.4	D	D	D	Y
JPL5-B4(1)	249966	0.4	D	D	D	Y
JPL5-B5(1)	249966	0.4	D	D	D	Y
JPL5-C1(1)	249972	0.4	D	D	D	Y
JPL5-C2(1)	249972	0.4	D	D	D	Y
JPL5-C3(1)	249972	0.4	D	D	D	Y
JPL5-C4(1)	249972	0.4	D	D	D	Y
JPL5-C5(1)	249972	0.4	D	D	D	Y
JPL5-D1(1)	249972	0.4	0.426	107	106	Y
JPL5-D2(1)	249972	0.4	0.4071	102	101	Y
JPL5-D3(1)	249972	0.4	0.322	81	80	Y
JPL5-D4(1)	249972	0.4	0.373	93	93	Y
JPL5-D5(1)	249972	0.4	0.332	83	83	Y
JPL5-E1(1)	249981	0.4	0.537	134	134	Y
JPL5-E2(1)	249981	0.4	0.4648	116	116	Y
JPL5-E3(1)	249981	0.4	0.4822	121	120	Y
JPL5-E4(1)	249981	0.4	0.496	124	123	Y
JPL5-E5(1)	249981	0.4	D	D	D	Y
JPL5-F1(1)	249981	0.4	0.4396	110	109	Y
JPL5-F2(1)	249981	0.4	0.431	108	107	Y
JPL5-F3(1)	249981	0.4	0.393	98	98	Y
JPL5-F4(1)	249981	0.4	0.431	108	107	Y
JPL5-F5(1)	249981	0.4	0.463	116	115	Y
JPL5-G1(1)	249992	0.4	0.3463	87	87	Y
JPL5-G2(1)	249992	0.4	0.3346	84	83	Y
JPL5-G3(1)	249992	0.4	0.2427	61	60	Y
JPL5-G4(1)	249992	0.4	0.2891	72	72	Y

D - diluted out
ID - identification
PCB - polychlorinated biphenyl
SDG - sample delivery group
TCX - tetrachloro-m-xylene

Table G-3

PCB Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 2)

Laboratory: STL/Test America

SDG: SEE BELOW

Percent recovery (%R) = SF/SS x 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID:	SDG	Surrogate Spiked	Surrogate Found	Recalculated	Reported	Acceptable
				%R	%R	Y/N
JPL5-G5(1)	249992	0.4	0.3088	77	77	Y
JPL5-H1(1)	249992	0.4	0.3067	77	76	Y
JPL5-H2(1)	249992	0.4	0.3032	76	75	Y
JPL5-H3(1)	249992	0.4	0.331	83	82	Y
JPL5-H4(1)	249992	0.4	0.276	69	69	Y
JPL5-H5(1)	249992	0.4	0.2867	72	71	Y
JPL5-AP1(0.5)	500-4792	0.4	0.3803	95	95	Y
JPL5-AP2(0.5)	500-4792	0.4	0.29	73	73	Y
JPL5-AP3(0.5)	500-4792	0.4	0.3579	89	89	Y
JPL5-AP4(0.5)	500-4792	0.4	0.2534	63	63	Y
JPL5-AF1(3)	500-4792	0.4	0.31	78	78	Y
JPL5-AF2(3)	500-4792	0.4	0.2429	61	61	Y
JPL5-AF3(3)	500-4792	0.4	0.3658	91	91	Y
JPL5-AP4(3)	500-4792	0.4	0.3475	87	87	Y
JPL5-1(3)	500-4954	0.4	0.2591	65	65	Y
JPL5-2(3)	500-4954	0.4	0.2589	65	64	Y
JPL5-3(3)	500-4954	0.4	0.2294	57	57	Y
JPL5-4(3)	500-4954	0.4	0.232	58	58	Y
JPL5-5(3)	500-4954	0.4	0.2707	68	67	Y
JPL5-6(3)	500-4954	0.4	0.2327	58	58	Y
JPL5-7(3)	500-4954	0.4	0.2534	63	63	Y
JPL5-8(3)	500-4954	0.4	0.2724	68	68	Y
JPL5-9(3)	500-4954	0.4	0.2951	74	73	Y
JPL5-10(3)	500-4954	0.4	0.2967	74	74	Y
JPL5-11(3)	500-4954	0.4	0.28	70	70	Y
JPL5-12(3)	500-4954	0.4	0.316	79	79	Y
JPL5-13(D)	500-4954	0.4	D	D	D	Y
JPL5-10-D(3)	500-4954	0.4	0.3081	77	77	Y
JPL5-PCN-1(3)	500-5265	0.4	D	D	D	Y
JPL5-PCN-2(3)	500-5265	0.4	D	D	D	Y
JPL5-PCN-3(3)	500-5265	0.4	D	D	D	Y
JPL5-PCN-4(3)	500-5265	0.4	D	D	D	Y
JPL5-PCN-5(3)	500-5265	0.4	D	D	D	Y
JPL5-PCN-6(3)	500-5265	0.4	0.343	86	86	Y
JPL5-PCN-7(3)	500-5265	0.4	0.35	88	88	Y
JPL5-PCN-8(3)	500-5265	0.4	D	D	D	Y
JPL5-PCN-9(3)	500-5265	0.4	D	D	D	Y
JPL5-PCN-10(3)	500-5265	0.4	D	D	D	Y
JPL5-14(3)	500-5306	0.4	0.3254	81	81	Y
JPL5-15(0)	500-5306	0.4	0.402	101	100	Y
JPL5-PCN2-1(5)	500-5933	0.4	0.2181	55	55	Y
JPL5-PCN2-2(5)	500-5933	0.4	0.2317	58	58	Y
JPL5-PCN2-3(5)	500-5933	0.4	0.2709	68	68	Y
JPL5-PCN2-4(5)	500-5933	0.4	0.2492	62	62	Y
JPL5-PCN2-5(5)	500-5933	0.4	0.2703	68	68	Y
JPL5-PCN2-6(5)	500-5933	0.4	0.26	65	65	Y
JPL5-PCN2-7(5)	500-5933	0.4	0.2525	63	63	Y
JPL5-PCN2-8(5)	500-5933	0.4	0.2315	58	58	Y
JPL5-PCN2-9(5)	500-5933	0.4	0.2231	56	56	Y
JPL5-PCN2-10(5)	500-5933	0.4	0.2317	58	58	Y

D - diluted out
ID - identification
PCB - polychlorinated biphenyl
SDG - sample delivery group
TCX - tetrachloro-m-xylene

Table G-4

PCB Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 2)

Laboratory: STL/Test America

SDG: see below
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

SDG: 250005			LCS Concentration		
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	(ug/Kg)	%R Recalculated	% R Reported
Aroclor 1016	167	0	151	90.368	90
Aroclor 1260	167	0	151	90.151	90

SDG: 250012			LCS Concentration		
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	(ug/Kg)	%R Recalculated	% R Reported
Aroclor 1016	167	0	172	102.999	103
Aroclor 1260	167	0	162	97.277	97

SDG: 249563			LCS Concentration		
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	(ug/Kg)	%R Recalculated	% R Reported
Aroclor 1016	167	0	153	91.969	92
Aroclor 1260	167	0	192	114.950	115

SDG: 249966			LCS Concentration		
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	(ug/Kg)	%R Recalculated	% R Reported
Aroclor 1016	167	0	149	89.644	90
Aroclor 1260	167	0	164	98.481	98

SDG: 249972			LCS Concentration		
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	(ug/Kg)	%R Recalculated	% R Reported
Aroclor 1016	167	0	149	89.178	89
Aroclor 1260	167	0	154	92.100	92

SDG: 249981			LCS Concentration		
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	(ug/Kg)	%R Recalculated	% R Reported
Aroclor 1016	167	0	163	97.695	98
Aroclor 1260	167	0	169	101.295	101

SDG: 249992			LCS Concentration		
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	(ug/Kg)	%R Recalculated	% R Reported
Aroclor 1016	167	0	156	93.579	94
Aroclor 1260	167	0	159	95.381	95

SDG: 500-4792			LCS Concentration		
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	(ug/Kg)	%R Recalculated	% R Reported
Aroclor 1016	167	0	141	84.583	85
Aroclor 1260	167	0	176	105.389	105

SDG: 500-4954			LCS Concentration		
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	(ug/Kg)	%R Recalculated	% R Reported
Aroclor 1016	167	0	139	83.383	83
Aroclor 1260	167	0	163	97.605	98

ID - identification
PCB - polychlorinated biphenyl
ug/kg - micrograms per kilogram

Table G-4

PCB Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 2)

SDG: 500-5265	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	LCS Concentration (ug/Kg)	%R Recalculated	% R Reported
Compound					
Aroclor 1016	167	0	142	85.183	85
Aroclor 1260	167	0	149	89.222	89

SDG: 500-5306	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	LCS Concentration (ug/Kg)	%R Recalculated	% R Reported
Compound					
Aroclor 1016	167	0	162	97.181	97
Aroclor 1260	167	0	163	97.605	98

SDG: 500-5933	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	LCS Concentration (ug/Kg)	%R Recalculated	% R Reported
Compound					
Aroclor 1016	167	0	94	56.389	56
Aroclor 1260	167	0	116	69.461	69

Table G-5

PCB Matrix Spike/Matrix Spike Duplicate Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 2)

Laboratory: STL/Test America

SDG: see below
Sample ID: see below

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result (QC result)
SC = Sample Result (orig. value)
SA = Spike amount added (true value)

SDG:250005 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
Sample ID: JPL5-J2(1)												
Aroclor 1016	218	219	0	0	211.1	211.3	103	103.27	104	103.80	1	0.97
Aroclor 1260	211	213	29.491	29.491	211.5	211.7	86	85.77	87	86.81	1	1.16

SDG: 250012 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
Sample ID: JPL5-K2(1)												
Aroclor 1016	235	235	0	0	211.8	212.9	111	110.90	110	110.33	1	0.90
Aroclor 1260	239	236	0	0	212.2	213.3	113	112.58	110	110.41	3	2.69

SDG: 249966 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
Sample ID: JPL5-A1(1)												
Aroclor 1016	38045	36893	38000	38000	379600	368100	D	0.01	D	-0.30	D	0.00
Aroclor 1260	38045	36893	38000	38000	380300	368800	D	0.01	D	-0.30	D	0.00

D - Due to matrix interferences, sample was diluted and MS/MSD was diluted out.

SDG: 249972 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
Sample ID: JPL5-C4(1)												
Aroclor 1016	405	401	405.01	405.01	4044	4006	D	0.00	D	-0.09	D	0.00
Aroclor 1260	405	401	405.01	405.01	4051	4013	D	0.00	D	-0.09	D	0.00

D - Due to matrix interferences, sample was diluted and MS/MSD was diluted out.

ID - identification
ug/kg - micrograms per kilogram
PCB - polychlorinated biphenyl
%R - percent recovery
RPD - relative percent difference
SDG - sample delivery group

Table G-5

PCB Matrix Spike/Matrix Spike Duplicate Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 2)

SDG:249981 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL5-E1(1)											
Aroclor 1016	314	307	0	0	220	220	143	142.91	139	139.41	3	2.84
Aroclor 1260	819	854	270	270	882.6	820	63	62.16	71	71.22	12	11.94

SDG: 249992 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL5-G2(1)											
Aroclor 1016	176	176	0	0	201.7	200.5	87	87.06	88	87.76	1	1.14
Aroclor 1260	205	210	20	20	202	200.9	91	91.53	94	94.70	3	3.24

SDG: 500-4792 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL5-AP1(0.5)											
Aroclor 1016	168	186	0	0	175	174	96	96.00	107	106.90	10	10.84
Aroclor 1260	187	214	21	21	175	174	95	94.86	111	110.92	13	13.47

SDG: 500-4954 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL5-6(3)											
Aroclor 1016	169	168	0	0	193	193	88	87.56	87	87.05	1	1.14
Aroclor 1260	221	203	33	33	194	193	97	96.91	88	88.08	8	8.49

SDG: 500-5265 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL5-PCN-3(3)											
Aroclor 1016	NA	NA	NA	NA	174	175	D	D	D	D	D	D
Aroclor 1260	NA	NA	NA	NA	174	175	D	D	D	D	D	D

D - Due to matrix interferences, sample was diluted and MS/MSD was diluted out.

SDG 500-5933 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL5-PCN2-7(5)											
Aroclor 1016	152	166	0	0	217	223	70	70.05	74	74.44	9	8.81
Aroclor 1260	165	185	0	0	217	223	76	76.04	83	82.96	11	11.43

ID - identification
ug/kg - micrograms per kilogram
PCB - polychlorinated biphenyl
%R - percent recovery
RPD - relative percent difference
SDG - sample delivery group

APPENDIX H

VALIDATION VERIFICATION WORKSHEETS-TPH

Table H-1

TPH Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 3)

Laboratory: STL/Test America
Calibration Date: SEE BELOWSDG: 248084
248307
248379RF = peak Area

Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
TPH-GRO 8-10-06	Level 1	50	2003367	40067	7.7	40067	6.838*
	Level 2	100	3816530	38165		38165	
	Level 3	200	7999518	39998		39998	
	Level 4	400	14182207	35456		35456	
	Level 5	600	21384600	35641		35641	
	Level 6	1000	32908932	32909		32909	
Average CF				37039		37039	

Laboratory: STL/Test America
Calibration Date: SEE BELOWSDG: 248084
248307
248379RF = peak Area

Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
TPH-DRO 8-15-06	Level 1	25	2318841	92754	9.4	92754	9.4
	Level 2	100	8214128	82141		82141	
	Level 3	250	18376361	73505		73505	
	Level 4	500	37161897	74324		74324	
	Level 5	750	57400590	76534		76534	
	Level 6	1000	74971095	74971		74971	
Average CF				79038		79038	

Laboratory: STL/Test America
Calibration Date: SEE BELOWSDG: 250224RF = peak Area

Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
TPH-DRO 2-5-07	Level 1	25	2652251	106090	15.1	106090	15
	Level 2	100	7655180	76552		76552	
	Level 3	250	19435364	77741		77741	
	Level 4	500	36007210	72014		72014	
	Level 5	750	59698167	79598		79598	
	Level 6	1000	77138307	77138		77138	
Average CF				81522		81522	

Laboratory: STL/Test America
Calibration Date: SEE BELOWSDG: 250224
250400RF = peak Area

Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
TPH-GRO 2-10-07	Level 1	50	775252	15505	3.2	15505	3
	Level 2	100	1652892	16529		16529	
	Level 3	200	3241968	16210		16210	
	Level 4	400	6779664	16949		16949	
	Level 5	600	9958962	16598		16598	
	Level 6	1000	16830794	16831		16831	
Average CF				16437		16437	

TPH - total petroleum hydrocarbon

DRO - diesel range organics

GRO - gasoline range organics

* = discrepancy due to rounding used by laboratory software

SDG - sample delivery group

CF - Calibration factor

%RSD - percent relative standard deviation

Table H-1

TPH Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 3)

Laboratory: STL/Test America
Calibration Date: SEE BELOW

SDG: 250400

RF = peak Area
Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
TPH-DRO 3-22-07	Level 1	25	2270772	90831	6.6	90831	7
	Level 2	100	8411505	84115		84115	
	Level 3	250	21779698	87119		87119	
	Level 4	500	37863469	75727		75727	
	Level 5	750	67564880	90087		90086	
	Level 6	1000	82433177	82433		82433	
Average CF				85052		85052	

Laboratory: STL/Test America
Calibration Date: SEE BELOW

SDG:

RF = peak Area
Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
TPH-GRO 5-6-07	Level 1	50	818185	16364	2.0	16364	2
	Level 2	100	1700377	17004		17004	
	Level 3	200	3340644	16703		16703	
	Level 4	400	6668763	16672		16672	
	Level 5	600	9845484	16409		16409	
	Level 6	1000	16041702	16042		16042	
Average CF				16532		16522	

Laboratory: STL/Test America
Calibration Date: SEE BELOW

SDG: 500-4317
500-4427
500-4472

RF = peak Area
Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
TPH-DRO 5-10-07	Level 1	25	2305801	92232	10.8	92232	11
	Level 2	100	8116013	81160		81160	
	Level 3	250	17732766	70931		70931	
	Level 4	500	37314599	74629		74629	
	Level 5	750	54119942	72160		72160	
	Level 6	1000	71236448	71236		71236	
Average CF				77058		77058	

Laboratory: STL/Test America
Calibration Date: SEE BELOW

SDG: 500-4427

RF = peak Area
Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
TPH-GRO 5-6-07	Level 1	50	929692	18594	5.0	18594	5
	Level 2	100	1779584	17796		17796	
	Level 3	200	3381067	16905		16905	
	Level 4	400	6588219	16471		16471	
	Level 5	600	9998860	16665		16665	
	Level 6	1000	16462319	16462		16462	
Average CF				17149		17149	

TPH - total petroleum hydrocarbon
DRO - diesel range organics
GRO - gasoline range organics
* = discrepancy due to rounding used by laboratory software
SDG - sample delivery group
CF - Calibration factor
%RSD - percent relative standard deviation

Table H-1

TPH Initial Calibration Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 3 of 3)

Laboratory: STL/Test America
Calibration Date: SEE BELOWSDG: 500-4472, 500-5501, 500-6112
500-6332 and 500-5499RF = peak Area

Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
TPH-GRO 5-20-07	Level 1	50	818185	16364	2.0	16364	2
	Level 2	100	1700377	17004		17004	
	Level 3	200	3340644	16703		16703	
	Level 4	400	6668763	16672		16672	
	Level 5	600	9845484	16409		16409	
	Level 6	1000	16041702	16042		16042	
Average CF				16532		16532	

Laboratory: STL/Test America
Calibration Date: SEE BELOWSDG: 500-5501
500-5499RF = peak Area

Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
TPH-DRO 7-20-07	Level 1	25	2354221	94169	12.5	94169	13
	Level 2	100	8057724	80577		80577	
	Level 3	250	18448419	73794		73794	
	Level 4	500	36945609	73891		81891	
	Level 5	750	52947229	70596		70596	
	Level 6	1000	67457951	67458		67458	
Average CF				76748		76414	

Laboratory: STL/Test America
Calibration Date: SEE BELOWSDG: 500-6112RF = peak Area

Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
TPH-DRO 8-22-07	Level 1	25	2424247	96970	15.5	96970	15
	Level 2	100	7157019	71570		71570	
	Level 3	250	17861591	71446		71445	
	Level 4	500	34527517	69055		69055	
	Level 5	750	50901355	67868		67868	
	Level 6	1000	66812365	66812		66812	
Average CF				73954		73954	

Laboratory: STL/Test America
Calibration Date: SEE BELOWSDG: 500-6332RF = peak Area

Total Mass of Standard injected (in nanograms)

Compound	Standard	Cs	As	Recalculatd		Reported	
				CF	RSD	CF	RSD
TPH-DRO 9-4-07	Level 1	25	2139619	85585	10.2	85585	10
	Level 2	100	7344548	73445		73445	
	Level 3	250	17442257	69769		69769	
	Level 4	500	34026477	68053		68053	
	Level 5	750	50327876	67104		67104	
	Level 6	1000	66038095	66038		66038	
Average CF				71666		71666	

TPH - total petroleum hydrocarbon

DRO - diesel range organics

GRO - gasoline range organics

* = discrepancy due to rounding used by laboratory software

SDG - sample delivery group

CF - Calibration factor

%RSD - percent relative standard deviation

Table H-2

TPH Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 6)

Laboratory: STL/Test America
Calibration Date: GRO: 8-10-06 AT 0729 SDG: 248084
 DRO: 8-15-06 AT 2035 SDG: 248084, 248307, 248379

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
TPH-GRO	400	14182200	35456	35456	36306	2.3	2.3
TPH-DRO	250	19079725	76319	76319	79038	3.4	3.4

Laboratory: STL/Test America
Calibration Date: GRO: 8-27-06 at 1806 SDG: 248307

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
TPH-GRO	400	14228444	35571	35573	36306	2.0	2.0

CCV - continuing calibration verification
 %D - percent difference
 D or meanD<=15% with max %D<30%
 DRO - diesel range organics
 GRO - gasoline range organics
 TPH - total petroleum hydrocarbons

Table H-2

TPH Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 6)

Laboratory: STL/Test America
Calibration Date: GRO: 8-30-06 AT 0716

SDG: 248379

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
TPH-GRO	400	15034809	37587	37587	36306	3.5	3.5

Laboratory: STL/Test America
Calibration Date: GRO: 2-11-07 AT 1427
DRO: 2-12-07 at 1419

SDG: 250224
SDG: 250224

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
TPH-GRO	400	6748635	16872	16872	16437	2.6	2.6
TPH-DRO	250	18521293	74085	74085	81522	9.1	9.1

CCV - continuing calibration verification
%D - percent difference
D or meanD<=15% with max %D<30%
DRO - diesel range organics
GRO - gasoline range organics
TPH - total petroleum hydrocarbons

Table H-2

TPH Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 3 of 6)

Laboratory: STL/Test America
 Calibration Date: GRO: 3-22-07 AT 0830
DRO: 3-22-07 At 1718

SDG: 250400
 SDG: 250400

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
TPH-GRO	400	6226510	15566	15566	16437	5.3	5.2
TPH-DRO	500	39599565	79199	79199	85052	6.9	6.9

Laboratory: STL/Test America
 Calibration Date: GRO: 6-25-07
DRO: 5-23-07

SDG: 500-4317
 SDG: 500-4317

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
TPH-GRO	400	6666142	16665	16665	17149	2.8	2.8
TPH-DRO	250	20066637	80267	80266	77058	4.2	4.2

CCV - continuing calibration verification
 %D - percent difference
 D or meanD<=15% with max %D<30%
 DRO - diesel range organics
 GRO - gasoline range organics
 TPH - total petroleum hydrocarbons

Table H-2

TPH Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 4 of 6)

Laboratory: STL/Test America
Calibration Date: GRO: 5-30-07
DRO: 6-1-07

SDG: 500-4427
SDG: 500-4427

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
TPH-GRO	400	6275460	15689	15689	17149	8.5	8.5
TPH-DRO	500	37664861	75330	75330	77058	2.2	2.2

Laboratory: STL/Test America
Calibration Date: GRO: 6-2-07
DRO: 6-2-07

SDG: 500-4472
SDG: 500-4472

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
TPH-GRO	400	6855064	17138	17138	16532	3.7	3.7
TPH-DRO	500	34735337	69471	69471	77058	9.8	9.8

CCV - continuing calibration verification
%D - percent difference
D or meanD<=15% with max %D<30%
DRO - diesel range organics
GRO - gasoline range organics
TPH - total petroleum hydrocarbons

Table H-2

TPH Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 5 of 6)

Laboratory: STL/Test America
Calibration Date: GRO: 7-28-07
DRO: 7-24-07

SDG: 500-5501
SDG: 500-5501

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
TPH-GRO	400	6083185	15208	15208	16532	8.0	8.0
TPH-DRO	250	19583888	78336	78336	76414	2.5	2.5

Laboratory: STL/Test America
Calibration Date: GRO:
DRO: 09-07-07

SDG: 500-6332
SDG: 500-6332

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
Ais = peak area of internal standard
Cs = concentration of analyte or surrogate
Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
TPH-GRO	400	6136981	15342	15342	16532	7.2	7.2
TPH-DRO	500	32726243	65452	65452	71666	8.7	8.7

CCV - continuing calibration verification
%D - percent difference
D or meanD<=15% with max %D<30%
DRO - diesel range organics
GRO - gasoline range organics
TPH - total petroleum hydrocarbons

Table H-2

TPH Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 6 of 6)

Laboratory: STL/Test America
 Calibration Date: GRO: 7-27-07
 DRO: 7-25-07

SDG: 500-5499
 SDG: 500-5499

$$RF = \frac{As * Cis}{Ais * Cs}$$

where: As = peak area of analyte or surrogate
 Ais = peak area of internal standard
 Cs = concentration of analyte or surrogate
 Cis = concentration of internal standard

Compound	Cs	As	Recalculated CCV CF	Reported CCV CF	IC RF	Recalculated %D	Reported %D
TPH-GRO	400	6476618	16192	16192	16532	2.1	2.1
TPH-DRO	250	20134421	80538	80538	76414	5.4	5.4

CCV - continuing calibration verification
 %D - percent difference
 D or meanD<=15% with max %D<30%
 DRO - diesel range organics
 GRO - gasoline range organics
 TPH - total petroleum hydrocarbons

Table H-3

TPH Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 2)

Laboratory: STL/Test AmericaSDG: SEE BELOW

Percent recovery (%R) = SF/SS x 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID:	SDG	Surrogate Spiked	TPH-GRO						TPH-DRO						
			a,a,a-trifluorotoluene			4-bromofluorobenzene			2-fluorobiphenyl			o-terphenyl			
			Surrogate Found	Recalculated	Reported	Surrogate Found	Recalculated	Reported	Surrogate Found	Recalculated	Reported	Surrogate Found	Recalculated	Reported	Recalculation Acceptable
				%R	%R		%R	%R		%R	%R		%R	Y/N	
JPM3-ITF-AF86(2)	248084	20	17.7	89	89	16.2	81	81	14.3	72	72	19.9	100	100	Y
JPM3-ITF-AF87(2)	248084	20	17.7	89	89	15.9	79	79	15.1	75	75	16.9	84	84	Y
JPM3-ITF-AF130(2)	248307	20	18.3	91	91	16.7	83	83	16.3	81	81	17.3	86	86	Y
JPM3-ITF-AF133(2)	248307	20	18.3	92	92	16.6	83	83	16.0	80	80	18.6	93	93	Y
JPM3-ITF-AF130(2)-D	248307	20	18.1	91	91	16.5	82	82	15.9	79	79	17.1	86	86	Y
JPM3-ITF-AF153(2)	248379	20	20.4	102	102	18.6	93	93	14.7	73	73	15.8	79	79	Y
JPM3-ITF-AF154(2)	248379	20	18.6	93	93	17.0	85	85	13.6	68	68	16.1	80	80	Y
JPM3-ITF-AF153(2)-D	248379	20	18.8	94	94	17.2	86	86	11.5	57	57	14.3	72	72	Y
JP-M3-ITF-AF97B(1)	250224	20	16.5	83	83	13.1	65	65	12.8	64	64	14.2	71	71	Y
JPM3-ITF-AF208B(1)	250224	20	16.8	84	84	14.6	73	73	14.1	71	71	14.8	74	74	Y
JPM3-ITF-AF209B(1)	250224	20	16.4	82	82	13.3	67	67	16.4	82	82	18.3	92	92	Y
JPL2-CPTANK(0.5)	250400	20	17.7	88	88	14.5	73	73	D	D	D	D	D	D	Y
JPL2-AST-TF1(3)	550-4317	20	16.5	82	82	14.1	71	70	11.5	58	58	19.4	97	97	Y
JPL2-AST-TF2(4)	550-4317	20	17.6	88	88	21.6	108	108	D	D	D	D	D	D	Y
JPL2-AST-TP1(0.5)	550-4317	20	18.0	90	90	15.5	77	77	16.1	81	81	20.2	101	101	Y
JPL2-AST-TP2(0.5)	550-4317	20	16.8	84	84	14.5	72	72	27.8	139	139	38.6	193	193	Y
JPL2-AST-TP3(0.5)	550-4317	20	18.1	90	90	15.4	77	77	17.7	89	89	24.2	121	121	Y
JPL2-PF5(4)	500-4427	20	19.2	96	96	18.1	91	90	D	D	D	D	D	D	Y
JPL2-PF6(6)	500-4427	20	18.2	91	91	21.8	109	109	31.7	159	159	24.9	125	125	Y
JPL2-TP4(1)	500-4472	20	15.8	79	79	13.2	66	66	22.7	114	114	26.78	134	134	Y
JPL2-TP5(1)	500-4472	20	14.9	74	74	12.5	63	62	17.3	86	86	21.37	107	107	Y
JPL2TP6(1)	500-4472	20	15.2	76	76	13.3	66	66	14.7	73	73	18.67	93	93	Y
JPL2TF3(5)	500-4472	20	15.1	76	76	12.9	65	64	14.6	73	73	18.59	93	93	Y
JPL2TF4(7)	500-4472	20	18.5	92	92	21.9	109	109	44.2	221	221	30.66	153	153	Y
JPL5-AP34(0.5)	500-5501	20	15.6	78	78	12.1	61	61	18.9	94	94	21.3	107	107	Y
JPL5-AP35(0.5)	500-5501	20	13.6	68	68	10.1	51	51	19.0	95	95	22.9	115	115	Y
JPL5-AP36(0.5)	500-5501	20	12.7	63	63	7.8	39	39	18.9	95	95	22.0	110	110	Y
JPL5-AF9(3)	500-5501	20	14.0	70	70	10.7	54	53	19.8	99	99	22.4	112	112	Y
JPL5-AF10(3)	500-5501	20	14.3	72	72	11.6	58	58	20.1	100	100	22.7	113	113	Y
JPL5-AF11(3)	500-5501	20	13.6	68	68	9.7	49	49	17.6	88	88	20.2	101	101	Y
JPL5-AF12(3)	500-5501	20	13.3	66	66	9.9	49	49	19.3	97	97	22.2	111	111	Y
JPL5-AF13(3)	500-5501	20	14.4	72	72	11.5	57	57	16.3	81	81	19.0	95	95	Y
JPL5-AF14(3)	500-5501	20	12.8	64	64	9.6	48	48	19.1	96	96	22.4	112	112	Y
JPL5-AF15(3)	500-5501	20	17.2	86	86	14.7	73	73	16.7	84	84	19.7	98	98	Y
JPL5-AF16(3)	500-5501	20	16.1	80	80	14.2	71	71	18.6	93	93	22.0	110	110	Y
JPL5-AF17(3)	500-5501	20	15.3	77	76	12.2	61	61	19.7	98	98	22.5	113	113	Y
JPL5-AF18(3)	500-5501	20	17.9	90	89	16.0	80	80	17.8	89	89	21.5	107	107	Y
JPL5-AF19(3)	500-5501	20	17.9	90	89	16.7	84	79	15.9	80	80	19.2	96	96	Y
JPL5-AF20(3)	500-5501	20	16.6	83	83	14.6	73	73	15.8	79	79	19.3	97	97	Y
JPL5-AF21(3)	500-5501	20	16.2	81	81	14.4	72	72	16.3	82	82	19.6	98	98	Y
JPL5-AF20(3)-D	500-5501	20	15.9	80	79	14.0	70	70	18.0	90	90	21.8	109	109	Y
JPL5-AF21(3)-D	500-5501	20	16.0	80	80	14.0	70	70	18.2	91	91	22.1	111	111	Y
JPL5-SP1(1)	500-6112	20	15.1	76	75	12.4	62	62	15.9	79	79	21.7	108	108	Y
JPL5-SP2(1)	500-6112	20	14.2	71	71	11.4	57	57	16.2	81	81	21.2	106	106	Y
JPL5-SP3(1)	500-6112	20	13.9	70	69	11.0	55	55	17.1	85	85	22.2	111	111	Y
JPL5-SP4(1)	500-6112	20	14.5	73	72	11.9	60	60	14.8	74	74	19.4	97	97	Y
JPL5-AP5(1)	500-6112	20	14.2	71	71	11.2	56	56	13.1	65	65	19.1	96	96	Y

ID - identification
DRO - diesel range organics
GRO - gasoline range organics
TPH - total petroleum hydrocarbons
TCX - tetrachloro-m-xylene
SDG - sample delivery group

Table H-3

TPH Surrogates Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 2)

Laboratory: STL/Test America

SDG: SEE BELOW

Percent recovery (%R) = SF/SS x 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID:	SDG	Surrogate Spiked	TPH-GRO						TPH-DRO						
			a,a,a-trifluorotoluene			4-bromofluorobenzene			2-fluorobiphenyl			o-terphenyl			
			Surrogate Found	Recalculated	Reported	Surrogate Found	Recalculated	Reported	Surrogate Found	Recalculated	Reported	Surrogate Found	Recalculated	Reported	Recalculation Acceptable
				%R	%R		%R	%R		%R	%R		%R	%R	
JPL5-SP6(1)	500-6112	20	15.2	76	76	12.5	62	62	15.3	76	76	21.6	108	108	Y
JPL5-AP42(0.5)	500-6332	20	15.1	75	75	11.8	59	59	14.9	75	75	19.5	97	97	Y
JPL5-AP43(0.5)	500-6332	20	15.6	78	78	13.4	67	67	18.0	90	90	23.4	117	117	Y
JPL5-AP44(0.5)	500-6332	20	14.8	74	74	12.2	61	61	16.6	83	83	21.8	109	109	Y
JPL5-AP45(0.5)	500-6332	20	14.3	72	71	11.1	56	56	18.9	94	94	22.9	115	115	Y
JPL5-AP46(0.5)	500-6332	20	14.5	73	73	10.0	50	50	16.0	80	80	20.3	101	101	Y
JPL5-AF28(2)	500-6332	20	16.0	80	80	13.9	70	69	16.0	80	80	19.7	99	99	Y
JPL5-AF29(2)	500-6332	20	13.9	70	69	11.0	55	55	15.9	80	80	21.5	108	108	Y
JPL5-AP10(0.5)	500-5499	20	15.6	78	78	12.7	64	63	16.2	81	81	20.8	104	104	Y
JPL5-AP11(0.5)	500-5499	20	15.2	76	76	12.0	60	60	14.9	75	75	18.9	94	94	Y
JPL5-AP12(0.5)	500-5499	20	17.1	85	85	13.9	69	69	17.9	90	90	21.2	106	107	Y
JPL5-AP13(0.5)	500-5499	20	16.2	81	81	13.3	67	66	17.5	88	88	20.7	103	103	Y
JPL5-AP14(0.5)	500-5499	20	12.8	64	64	8.6	43	43	19.0	95	95	22.4	112	112	Y
JPL5-AP15(0.5)	500-5499	20	14.7	73	73	11.2	56	56	17.6	88	88	21.0	105	105	Y
JPL5-AP16(0.5)	500-5499	20	13.8	69	69	9.9	50	49	18.0	90	90	21.3	106	106	Y
JPL5-AP17(0.5)	500-5499	20	14.5	73	73	11.3	56	56	16.3	81	81	22.6	113	113	Y
JPL5-AP18(0.5)	500-5499	20	13.7	68	68	9.7	49	49	18.0	90	90	21.7	108	108	Y
JPL5-AP19(0.5)	500-5499	20	14.6	73	73	11.4	57	57	17.9	89	89	21.7	109	109	Y
JPL5-AP20(0.5)	500-5499	20	14.2	71	71	10.1	51	51	17.9	89	89	22.5	112	112	Y
JPL5-AP21(0.5)	500-5499	20	16.0	80	80	12.8	64	64	19.0	95	95	22.3	111	111	Y
JPL5-AP22(0.5)	500-5499	20	13.8	69	69	10.7	53	53	18.9	95	95	22.3	111	111	Y
JPL5-AP23(0.5)	500-5499	20	12.9	64	64	9.1	46	46	20.3	101	101	22.5	113	113	Y
JPL5-AP24(0.5)	500-5499	20	13.6	68	68	9.3	47	47	18.3	91	91	22.2	111	111	Y
JPL5-AP25(0.5)	500-5499	20	13.9	70	69	10.5	52	52	15.6	78	78	20.6	103	103	Y
JPL5-AP26(0.5)	500-5499	20	13.5	68	68	10.4	52	47	20.3	101	101	25.8	129	129	Y
JPL5-AP27(0.5)	500-5499	20	13.4	67	67	9.6	48	48	18.4	92	92	21.9	110	110	Y
JPL5-AP28(0.5)	500-5499	20	12.6	63	63	8.9	44	44	15.9	79	79	21.9	109	109	Y
JPL5-AP29(0.5)	500-5499	20	13.3	67	66	9.0	45	45	16.8	84	84	20.8	104	104	Y
JPL5-AP30(0.5)	500-5499	20	13.5	68	68	9.8	49	49	14.5	73	73	19.5	98	98	Y
JPL5-AP31(0.5)	500-5499	20	12.6	63	63	7.8	39	39	17.5	88	88	20.9	105	105	Y
JPL5-AP32(0.5)	500-5499	20	11.7	59	59	6.8	34	34	18.0	90	90	20.9	104	104	Y
JPL5-AP33(0.5)	500-5499	20	12.4	62	62	8.1	41	40	18.9	94	94	22.1	110	110	Y

ID - identification
DRO - diesel range organics
GRO - gasoline range organics
TPH - total petroleum hydrocarbons
TCX - tetrachloro-m-xylene
SDG - sample delivery group

Table H-4

TPH Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 2)

Laboratory: STL/Test America

SDG: see below
Sample ID: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

SDG: 248084					
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	LCS Concentration (ug/Kg)	%R Recalculated	% R Reported
TPH-DRO	67	0	58	86.7	87
TPH-GRO	400	0	394	98.5	98

SDG: 2448307					
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	LCS Concentration (ug/Kg)	%R Recalculated	% R Reported
TPH-DRO	67	0	67	100.5	100
TPH-GRO	400	0	362	90.5	91

SDG: 248379					
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	LCS Concentration (ug/Kg)	%R Recalculated	% R Reported
TPH-DRO	67	0	65	97.9	98
TPH-GRO	400	0	390	97.6	98

SDG: 250224					
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	LCS Concentration (ug/Kg)	%R Recalculated	% R Reported
TPH-DRO	67	0	57	84.8	85
TPH-GRO	400	0	367	91.7	92

SDG: 250400					
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	LCS Concentration (ug/Kg)	%R Recalculated	% R Reported
TPH-DRO	67	0	59	89.0	89
TPH-GRO	400	0	416	103.9	104

SDG: 500-4317					
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	LCS Concentration (ug/Kg)	%R Recalculated	% R Reported
TPH-DRO	67	0	60	89.5	89
TPH-GRO	400	0	364	91.0	91

SDG: 500-4427					
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	LCS Concentration (ug/Kg)	%R Recalculated	% R Reported
TPH-DRO	67	0	65	97.6	98
TPH-GRO	20000	0	18100	90.5	91

SDG: 500-4472					
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	LCS Concentration (ug/Kg)	%R Recalculated	% R Reported
TPH-DRO	67	0	55	83.1	83
TPH-GRO	20000	0	19100	95.5	96

SDG: 500-5501					
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	LCS Concentration (ug/Kg)	%R Recalculated	% R Reported
TPH-DRO	67	0	62	93.1	93
TPH-GRO	400	0	354	88.5	88

DRO - diesel range organics
GRO - gasoline range organics
ID - identification
LCS - laboratory control sample
ug/kg - micrograms per kilogram
TPH - total petroleum hydrocarbons

Table H-4

TPH Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 2)

SDG: 500-6112			LCS Concentration		
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	(ug/Kg)	%R Recalculated	% R Reported
TPH-DRO	67	0	63	94.3	94
TPH-GRO	400	0	370	92.5	93

SDG: 500-6332			LCS Concentration		
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	(ug/Kg)	%R Recalculated	% R Reported
TPH-DRO	67	0	69	103.3	103
TPH-GRO	400	0	341	85.3	85

SDG: 500-5499			LCS Concentration		
Compound	Spike Added (ug/Kg)	Blank Concentration (ug/Kg)	(ug/Kg)	%R Recalculated	% R Reported
TPH-DRO	67	0	62	93.1	93
TPH-GRO	400	0	379	94.8	95

DRO - diesel range organics
 GRO - gasoline range organics
 ID - identification
 LCS - laboratory control sample
 ug/kg - micrograms per kilogram
 TPH - total petroleum hydrocarbons

Table H-5

TPH Matrix Spike/Matrix Spike Duplicate Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 3)

Laboratory: STL/Test America

SDG: see below
Sample ID: see below

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result (QC result)
SC = Sample Result (orig. value)
SA = Spike amount added (true value)

SDGs: 248084 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	TPH-DRO	165	156	84.3			84.335	78.4	78.19	103	102.63	91
Sample ID: JPM3-ITF-AF87(2)												
TPH-GRO	382	389	0	0	451.5	451.5	85	84.71	86	86.22	1	1.17

SDGs: 248307 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	TPH-DRO	152	187	108.957			108.957	78.4	78.19	56	55.26	99
Sample ID: JPM3-ITF-AF130(2)												
TPH-GRO	409	407	0	0	475.6	475.6	86	86.09	85	85.50	1	1.17

SDGs: 248379 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	TPH-DRO	106	91	27			27	93.01	87.93	85	85.45	72
Sample ID: JPM3-ITF-AF153(2)												
TPH-GRO	522	504	0	0	568.2	568.2	92	91.85	89	88.72	3	3.31

DRO - diesel range organics
GRO - gasoline range organics
ID - identification
ug/kg - micrograms per kilogram
TPH - total petroleum hydrocarbon
SDG - sample delivery group
%R - percent recovery
RPD - relative percent difference
NP - not performed

Table H-5

TPH Matrix Spike/Matrix Spike Duplicate Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 3)

SDGs: 250224 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPM3-ITF-AF208B(1)	MS	MSD	MS			MSD					
TPH-DRO	74	57	10.552	10.552	83.17	85.47	76	75.75	54	54.29	34	33.85
Sample ID: JPM3-ITF-AF208B(1)												
TPH-GRO	508	587	0	0	644.1	644.1	79	78.87	91	91.21	14	14.12

SDGs: 500-4317 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL2-AST-TF2(4)	MS	MSD	MS			MSD					
TPH-DRO	5260	4140	4900	4900	80.2	80.4	D	448.88	D	-945.27	D	D
Sample ID: JPL2-AST-TF2(4)												
TPH-GRO	434000	433000	180000	180000	247000	247000	103	102.83	103	102.43	0	0.00

SDGs: 500-4427 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL2-PF5(4)	MS	MSD	MS			MSD					
TPH-DRO	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Sample ID: JPL2-PF5(4)												
TPH-GRO	493	442	100	100	502	502	78	78.29	67	68.13	11	10.91

SDGs: 500-4472 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL2-TP4(1)	MS	MSD	MS			MSD					
TPH-DRO	478	501	360	360	66.9	69	169	176.38	202	204.35	5	4.70
Sample ID:												
TPH-GRO	303	294	0	0	428	428	71	70.79	69	68.69	3	3.02

DRO - diesel range organics
 GRO - gasoline range organics
 ID - identification
 ug/kg - micrograms per kilogram
 TPH - total petroleum hydrocarbon
 SDG - sample delivery group
 %R - percent recovery
 RPD - relative percent difference
 NP - not performed

Table H-5

TPH Matrix Spike/Matrix Spike Duplicate Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 3 of 3)

SDGs: 500-5501 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL5-AP35(0.5)	MS	MSD	MS			MSD					
TPH-DRO	83	85	10	10	77.1	76.8	95	95.07	97	97.79	2	2.14
Sample ID: JPL5-AP35(0.5)												
TPH-GRO	319	318	0	0	475	475	67	67.16	67	66.95	0	0.31

SDGs: 500-6112 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL5-SP5(1)	MS	MSD	MS			MSD					
TPH-DRO	82	85	27	27	91.9	91.6	60	59.41	63	62.77	3	3.49
Sample ID: JPL5-SP1(1)												
TPH-GRO	412	408	0	0	587	587	70	70.19	69	69.51	1	0.98

SDGs: 500-6332 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL5-AP44(0.5)	MS	MSD	MS			MSD					
TPH-DRO	140	146	94	94	77.3	77.9	59	59.51	66	66.75	4	4.20
Sample ID: JPL5-AP42(0.5)												
TPH-GRO	353	311	0	0	474	474	74	74.47	65	65.61	13	12.95

SDGs: 500-5499 Compound	Spiked Sample Result (ug/kg)		Sample Result (ug/kg)		MS Spike Added (ug/kg)	MSD Spike Added	Matrix Spike %R		Matrix Spike Duplicate %R		MS/MSD RPD	
	MS	MSD	MS	MSD			Reported	Recalculated	Reported	Recalculated	Reported	Recalc.
	Sample ID: JPL5-AP13(0.5)	MS	MSD	MS			MSD					
TPH-DRO	66	77	9	9	75.3	75	76	76.23	90	90.13	14	14.27
Sample ID: JPL5-AP13(0.5)												
TPH-GRO	362	345	0	0	463	463	78	78.19	75	74.51	5	4.81

DRO - diesel range organics
 GRO - gasoline range organics
 ID - identification
 ug/kg - micrograms per kilogram
 TPH - total petroleum hydrocarbon
 SDG - sample delivery group
 %R - percent recovery
 RPD - relative percent difference
 NP - not performed

APPENDIX I

VALIDATION VERIFICATION WORKSHEETS-METALS

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 247884

Zinc

Concentration	Reading
0	-0.000115
0.4	0.404094
0.5	0.497647
1	0.996097

correlation coefficient = Recalculated Reported
0.999974871 0.99995

Laboratory: Severn Trent

SDG: 248048

Zinc

Concentration	Reading
0	-0.00003
0.4	0.406586
0.5	0.498884
1	0.990225

correlation coefficient = Recalculated Reported
0.999926656 0.99993

Laboratory: Severn Trent

SDG: 248048

Lead

Concentration	Reading
0	-0.000025
0.4	0.405143
0.5	0.498541
1	0.996063

correlation coefficient = Recalculated Reported
0.999968196 0.99994

Laboratory: Severn Trent

SDG: 248135

Lead

Concentration	Reading
0	-0.000019
0.4	0.396316
0.5	0.501919
1	1.01112

correlation coefficient = Recalculated Reported
0.999957616 0.99997

Laboratory: Severn Trent

SDG: 248160

Lead

Concentration	Reading
0	0.000019
0.4	0.396316
0.5	0.501919
1	1.01112

correlation coefficient = Recalculated Reported
0.999957363 0.99997

Laboratory: Severn Trent

SDG: 248182

Lead

Concentration	Reading
0	0.000019
0.4	0.396316
0.5	0.501919
1	1.01112

correlation coefficient = Recalculated Reported
0.999957363 0.99997

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

Laboratory: Severn Trent

SDG: 284208

Lead

Concentration	Reading
0	-0.000029
0.4	0.404876
0.5	0.50105
1	0.991375

correlation coefficient =	Recalculated 0.999948796	Reported 0.99993
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Laboratory: Severn Trent

SDG: 284233

Lead

Concentration	Reading
0	-0.000015
0.4	0.401348
0.5	0.502432
1	0.996562

correlation coefficient =	Recalculated 0.999987231	Reported 0.99998
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Laboratory: Severn Trent

SDG: 248248

Lead

Concentration	Reading
0	-0.000015
0.4	0.401348
0.5	0.502432
1	0.996562

correlation coefficient =	Recalculated 0.999987231	Reported 0.99998
---------------------------	-----------------------------	---------------------

Laboratory: Severn Trent

SDG: 248271

Lead

Concentration	Reading
0	-0.000000
0.4	0.399119
0.5	0.50282
1	1.00251

correlation coefficient =	Recalculated 0.999986286	Reported 1.00000
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Laboratory: Severn Trent

SDG: 248301

Lead

Concentration	Reading
0	-0.000016
0.4	0.399056
0.5	0.507848
1	0.992607

correlation coefficient =	Recalculated 0.999908627	Reported 0.99991
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Laboratory: Severn Trent

SDG: 248301

Lead

Concentration	Reading
0	0.000003
0.4	0.398134
0.5	0.503549
1	1.00352

correlation coefficient =	Recalculated 0.999987095	Reported 0.99999
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Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent
SDG: 248307

Copper

Concentration	Reading
0	-0.00001
0.4	0.399396
0.5	0.504153
1	0.993294

correlation coefficient = Recalculated Reported
 0.999962322 0.99996

Laboratory: Severn Trent
SDG: 248312

Lead

Concentration	Reading
0	-0.000007
0.4	0.398825
0.5	0.504586
1	0.998638

correlation coefficient = Recalculated Reported
 0.999977577 0.99998

Laboratory: Severn Trent
SDG: 248315

Arsenic

Concentration	Reading
0	-0.00002
0.4	0.396557
0.5	0.506359
1	0.993993

correlation coefficient = Recalculated Reported
 0.999928997 0.99993

Laboratory: Severn Trent
SDG: 248357

Lead

Concentration	Reading
0	-0.00009
0.4	0.400222
0.5	0.50347
1	0.998678

correlation coefficient = Recalculated Reported
 0.999988268 0.99999

Laboratory: Severn Trent
SDG: 248423

Lead

Concentration	Reading
0	-0.000025
0.4	0.401771
0.5	0.505614
1	0.99006

correlation coefficient = Recalculated Reported
 0.999921029 0.99991

Laboratory: Severn Trent
SDG: 248454

Arsenic

Concentration	Reading
0	0.000004
0.4	0.396205
0.5	0.506957
1	1.00135

correlation coefficient = Recalculated Reported
 0.999944252 0.99996

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 248537

Lead

Concentration	Reading
0	-0.000004
0.4	0.398352
0.5	0.505388
1	0.999094

correlation coefficient = Recalculated Reported
 0.999969953 0.99998

Laboratory: Severn Trent

SDG: 248926

Lead

Concentration	Reading
0	-0.000004
0.4	0.39633
0.5	0.509236
1	0.996472

correlation coefficient = Recalculated Reported
 0.999894409 0.99991

Laboratory: Severn Trent

SDG: 248926

Lead

Concentration	Reading
0	-0.00001
0.4	0.400982
0.5	0.502449
1	0.998372

correlation coefficient = Recalculated Reported
 0.999992741 0.99999

Laboratory: Severn Trent

SDG: 248927

Lead

Concentration	Reading
0	-0.000016
0.4	0.39922
0.5	0.507711
1	0.992271

correlation coefficient = Recalculated Reported
 0.999908796 0.99991

Laboratory: Severn Trent

SDG: 248927

Lead

Concentration	Reading
0	-0.00004
0.4	0.39633
0.5	0.509236
1	0.996472

correlation coefficient = Recalculated Reported
 0.999894289 0.99991

Laboratory: Severn Trent

SDG: 248981

Lead

Concentration	Reading
0	-0.000003
0.4	0.398095
0.5	0.505491
1	0.999533

correlation coefficient = Recalculated Reported
 0.999968904 0.99998

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 249144

Lead

Concentration	Reading
0	-0.00002
0.4	0.402316
0.5	0.502832
1	0.994257

correlation coefficient =	Recalculated 0.99997284	Reported 0.99996
---------------------------	----------------------------	---------------------

Laboratory: Severn Trent

SDG: 249144

Lead

Concentration	Reading
0	-0.000039
0.4	0.407598
0.5	0.498981
1	0.988702

correlation coefficient =	Recalculated 0.999901654	Reported 0.99988
---------------------------	-----------------------------	---------------------

Laboratory: Severn Trent

SDG: 249145

Lead

Concentration	Reading
0	-0.00002
0.4	0.402316
0.5	0.502832
1	0.994257

correlation coefficient =	Recalculated 0.99997284	Reported 0.99996
---------------------------	----------------------------	---------------------

Laboratory: Severn Trent

SDG: 249145

Lead

Concentration	Reading
0	-0.000039
0.4	0.407598
0.5	0.498981
1	0.988702

correlation coefficient =	Recalculated 0.999901654	Reported 0.99988
---------------------------	-----------------------------	---------------------

Laboratory: Severn Trent

SDG: 249177

Arsenic

Concentration	Reading
0	0.000029
0.4	0.393735
0.5	0.503721
1	1.01402

correlation coefficient =	Recalculated 0.999910899	Reported 0.99993
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Laboratory: Severn Trent

SDG: 249177

Zinc

Concentration	Reading
0	0.000039
0.4	0.393195
0.5	0.501307
1	1.01647

correlation coefficient =	Recalculated 0.999882884	Reported 0.99989
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Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 249220

Lead

Concentration	Reading
0	-0.000023
0.4	0.401466
0.5	0.505619
1	0.990816

correlation coefficient =	Recalculated 0.999927798	Reported 0.99992
---------------------------	-----------------------------	---------------------

Laboratory: Severn Trent

SDG: 249220

Lead

Concentration	Reading
0	0.000005
0.4	0.398552
0.5	0.502151
1	1.00507

correlation coefficient =	Recalculated 0.999991822	Reported 1.00000
---------------------------	-----------------------------	---------------------

Laboratory: Severn Trent

SDG: 249221

Lead

Concentration	Reading
0	-0.000023
0.4	0.401466
0.5	0.505619
1	0.990816

correlation coefficient =	Recalculated 0.999927798	Reported 0.99992
---------------------------	-----------------------------	---------------------

Laboratory: Severn Trent

SDG: 249221

Lead

Concentration	Reading
0	0.000005
0.4	0.398552
0.5	0.502151
1	1.00507

correlation coefficient =	Recalculated 0.999991822	Reported 1.00000
---------------------------	-----------------------------	---------------------

Laboratory: Severn Trent

SDG: 249239

Lead

Concentration	Reading
0	0.000004
0.4	0.400519
0.5	0.498833
1	1.00677

correlation coefficient =	Recalculated 0.999986238	Reported 0.99999
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Laboratory: Severn Trent

SDG: 249240

Lead

Concentration	Reading
0	-0.000023
0.4	0.401466
0.5	0.505619
1	0.990816

correlation coefficient =	Recalculated 0.999927798	Reported 0.99992
---------------------------	-----------------------------	---------------------

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 249398

Copper

Concentration	Reading
0	0.000018
0.4	0.396703
0.5	0.500634
1	1.00706

correlation coefficient = Recalculated Reported
 0.999975434 0.99998

Laboratory: Severn Trent

SDG: 249439

Lead

Concentration	Reading
0	-0.000002
0.4	0.397671
0.5	0.506098
1	0.999385

correlation coefficient = Recalculated Reported
 0.999960098 0.99997

Laboratory: Severn Trent

SDG: 249477

Lead

Concentration	Reading
0	-0.000009
0.4	0.396839
0.5	0.510032
1	0.993602

correlation coefficient = Recalculated Reported
 0.999865189 0.99988

Laboratory: Severn Trent

SDG: 249487

Lead

Concentration	Reading
0	-0.000009
0.4	0.396839
0.5	0.510032
1	0.993602

correlation coefficient = Recalculated Reported
 0.999865189 0.99988

Laboratory: Severn Trent

SDG: 249510

Lead

Concentration	Reading
0	0.000011
0.4	0.397875
0.5	0.500621
1	1.00426

correlation coefficient = Recalculated Reported
 0.999990507 0.99999

Laboratory: Severn Trent

SDG: 249510

Lead

Concentration	Reading
0	0.000008
0.4	0.39769
0.5	0.502984
1	1.00557

correlation coefficient = Recalculated Reported
 0.99998471 0.99999

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 13 of 103)

Laboratory: Severn Trent

SDG: 249511

Lead

Concentration	Reading
0	-0.000001
0.4	0.399254
0.5	0.502822
1	1.00196

correlation coefficient = Recalculated Reported
 0.999994451 1.00000

Laboratory: Severn Trent

SDG: 249511

Lead

Concentration	Reading
0	0.000008
0.4	0.39769
0.5	0.502984
1	1.00557

correlation coefficient = Recalculated Reported
 0.99998471 0.99999

Laboratory: Severn Trent

SDG: 249544

Lead

Concentration	Reading
0	0.000004
0.4	0.401181
0.5	0.497758
1	1.00753

correlation coefficient = Recalculated Reported
 0.999976616 0.99997

Laboratory: Severn Trent

SDG: 249544

Lead

Concentration	Reading
0	-0.000004
0.4	0.395693
0.5	0.509578
1	0.996912

correlation coefficient = Recalculated Reported
 0.999884825 0.99990

Laboratory: Severn Trent

SDG: 249563

Lead

Concentration	Reading
0	0.000008
0.4	0.395227
0.5	0.507769
1	1.00246

correlation coefficient = Recalculated Reported
 0.999926594 0.99994

Laboratory: Severn Trent

SDG: 249563

Lead

Concentration	Reading
0	0.000007
0.4	0.399179
0.5	0.500563
1	1.00695

correlation coefficient = Recalculated Reported
 0.999989523 0.99999

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 21 of 103)

Laboratory: Severn Trent

SDG: 250165

Zinc

Concentration	Reading
0	0.00001
0.4	0.396417
0.5	0.503847
1	1.00249

correlation coefficient = Recalculated Reported
 0.999974113 0.99998

Laboratory: Severn Trent

SDG: 250165

Lead

Concentration	Reading
0	-0.000001
0.4	0.39617
0.5	0.508793
1	0.998144

correlation coefficient = Recalculated Reported
 0.999908624 0.99992

Laboratory: Severn Trent

SDG: 250183

Lead

Concentration	Reading
0	0.000003
0.4	0.398097
0.5	0.503951
1	1.00299

correlation coefficient = Recalculated Reported
 0.99998497 0.99999

Laboratory: Severn Trent

SDG: 250192

Lead

Concentration	Reading
0	-0.000009
0.4	0.402748
0.5	0.499752
1	1.0039

correlation coefficient = Recalculated Reported
 0.999994186 0.99998

Laboratory: Severn Trent

SDG: 250224

Lead

Concentration	Reading
0	-0.000016
0.4	0.400425
0.5	0.506042
1	0.995457

correlation coefficient = Recalculated Reported
 0.999953913 0.99995

Laboratory: Severn Trent

SDG: 250224

Zinc

Concentration	Reading
0	-0.000009
0.4	0.399255
0.5	0.504614
1	0.993862

correlation coefficient = Recalculated Reported
 0.999960187 0.99996

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 250479

Chromium

Concentration	Reading
0	-0.000019
0.4	0.400143
0.5	0.505783
1	0.987956

correlation coefficient = Recalculated Reported
 0.999905262 0.99991

Laboratory: Severn Trent

SDG: 250479

Copper

Concentration	Reading
0	0.000012
0.4	0.396739
0.5	0.502276
1	1.00383

correlation coefficient = Recalculated Reported
 0.999973829 0.99998

Laboratory: Severn Trent

SDG: 250479

Lead

Concentration	Reading
0	0.000016
0.4	0.395014
0.5	0.504924
1	1.00364

correlation coefficient = Recalculated Reported
 0.999953379 0.99995

Laboratory: Severn Trent

SDG: 250479

Nickel

Concentration	Reading
0	-0.000018
0.4	0.399562
0.5	0.505514
1	0.988187

correlation coefficient = Recalculated Reported
 0.999911959 0.99991

Laboratory: Severn Trent

SDG: 250479

Zinc

Concentration	Reading
0	-0.000045
0.4	0.402906
0.5	0.508994
1	0.976229

correlation coefficient = Recalculated Reported
 0.999675657 0.99967

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 250483

Antimony

Concentration	Reading
0	0.000011
0.4	0.396073
0.5	0.50288
1	1.00203

correlation coefficient =	Recalculated 0.999976902	Reported 0.99998
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Laboratory: Severn Trent

SDG: 250483

Arsenic

Concentration	Reading
0	-0.000007
0.4	0.399612
0.5	0.502173
1	0.994367

correlation coefficient =	Recalculated 0.999983408	Reported 0.99998
---------------------------	-----------------------------	---------------------

Laboratory: Severn Trent

SDG: 250483

Barium

Concentration	Reading
0	0.000009
0.4	0.398118
0.5	0.500694
1	1.00346

correlation coefficient =	Recalculated 0.999993116	Reported 0.99999
---------------------------	-----------------------------	---------------------

Laboratory: Severn Trent

SDG: 250483

Chromium

Concentration	Reading
0	-0.000011
0.4	0.399132
0.5	0.505043
1	0.991964

correlation coefficient =	Recalculated 0.999944816	Reported 0.99994
---------------------------	-----------------------------	---------------------

Laboratory: Severn Trent

SDG: 250483

Copper

Concentration	Reading
0	0.000013
0.4	0.398186
0.5	0.49934
1	1.00609

correlation coefficient =	Recalculated 0.999999963	Reported 0.99998
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Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 250483

Lead

Concentration	Reading
0	-0.000011
0.4	0.398944
0.5	0.506927
1	0.995832

correlation coefficient = Recalculated Reported
 0.999942017 0.99995

Laboratory: Severn Trent

SDG: 250483

Nickel

Concentration	Reading
0	-0.000009
0.4	0.398533
0.5	0.504909
1	0.991967

correlation coefficient = Recalculated Reported
 0.999945686 0.99995

Laboratory: Severn Trent

SDG: 250483

Zinc

Concentration	Reading
0	-0.000027
0.4	0.399763
0.5	0.509242
1	0.983595

correlation coefficient = Recalculated Reported
 0.99979292 0.99979

Laboratory: Severn Trent

SDG: 250504

Antimony

Concentration	Reading
0	0.000033
0.4	0.390498
0.5	0.506487
1	1.00875

correlation coefficient = Recalculated Reported
 0.99986306 0.99986

Laboratory: Severn Trent

SDG: 250504

Arsenic

Concentration	Reading
0	0.00002
0.4	0.395866
0.5	0.500605
1	1.00687

correlation coefficient = Recalculated Reported
 0.999969428 0.99997

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 250534

Barium

Concentration	Reading
0	0.000018
0.4	0.393395
0.5	0.506746
1	1.00316

correlation coefficient = Recalculated Reported
 0.999916233 0.99992

Laboratory: Severn Trent

SDG: 250534

Chromium

Concentration	Reading
0	0.000019
0.4	0.393415
0.5	0.506465
1	1.00341

correlation coefficient = Recalculated Reported
 0.99991965 0.99992

Laboratory: Severn Trent

SDG: 250534

Lead

Concentration	Reading
0	0.00002
0.4	0.393669
0.5	0.506884
1	1.00788

correlation coefficient = Recalculated Reported
 0.999916093 0.99994

Laboratory: Severn Trent

SDG: 250534

Zinc

Concentration	Reading
0	0.000015
0.4	0.393621
0.5	0.507762
1	1.00192

correlation coefficient = Recalculated Reported
 0.999905703 0.99991

Laboratory: Severn Trent

SDG: 250536

Antimony

Concentration	Reading
0	0.000001
0.4	0.39661
0.5	0.505124
1	0.996193

correlation coefficient = Recalculated Reported
 0.999954376 0.99995

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 250536

Barium

Concentration	Reading
0	-0.000001
0.4	0.397801
0.5	0.504605
1	0.996428

correlation coefficient =	Recalculated 0.999966839	Reported 0.99997
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Laboratory: Severn Trent

SDG: 250536

Chromium

Concentration	Reading
0	0.000008
0.4	0.395999
0.5	0.505116
1	0.999652

correlation coefficient =	Recalculated 0.999958626	Reported 0.99996
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Laboratory: Severn Trent

SDG: 250536

Lead

Concentration	Reading
0	0.000003
0.4	0.395526
0.5	0.508474
1	1.00004

correlation coefficient =	Recalculated 0.999914383	Reported 0.99993
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Laboratory: Severn Trent

SDG: 250536

Zinc

Concentration	Reading
0	0.000013
0.4	0.394529
0.5	0.506718
1	1.00174

correlation coefficient =	Recalculated 0.999929982	Reported 0.99993
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Laboratory: Severn Trent

SDG: 250541

Lead

Concentration	Reading
0	-0.00001
0.4	0.402497
0.5	0.499544
1	1.0004

correlation coefficient =	Recalculated 0.999994951	Reported 0.99999
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Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-5265-1

Lead

Concentration	Reading
0	-0.000001
0.4	0.399125
0.5	0.504778
1	1.00505

correlation coefficient =	Recalculated 0.999987134	Reported 1.00000
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Laboratory: Severn Trent

SDG: 500-5265-1

Thallium

Concentration	Reading
0	0.000012
0.4	0.397962
0.5	0.504072
1	1.00664

correlation coefficient =	Recalculated 0.999982063	Reported 0.99998
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Laboratory: Severn Trent

SDG: 500-5265-1

Zinc

Concentration	Reading
0	0
0.4	0.400212
0.5	0.50141
1	1.00134

correlation coefficient =	Recalculated 0.999999405	Reported 1.00000
---------------------------	-----------------------------	---------------------

Laboratory: Severn Trent

SDG: 500-5285-1

Lead

Concentration	Reading
0	-0.000012
0.4	0.397408
0.5	0.509972
1	0.992636

correlation coefficient =	Recalculated 0.999862832	Reported 0.99987
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Laboratory: Severn Trent

SDG: 500-5286-1

Lead

Concentration	Reading
0	-0.00003
0.4	0.404092
0.5	0.50446
1	0.993173

correlation coefficient =	Recalculated 0.999945414	Reported 0.99992
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Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-5286-2

Lead

Concentration	Reading
0	-0.000003
0.4	0.399674
0.5	0.502706
1	1.00148

correlation coefficient = Recalculated Reported
 0.999995673 1.00000

Laboratory: Severn Trent

SDG: 500-5306-1

Lead

Concentration	Reading
0	-0.000003
0.4	0.399674
0.5	0.502706
1	1.00148

correlation coefficient = Recalculated Reported
 0.999995673 1.00000

Laboratory: Severn Trent

SDG: 500-5347-1

Arsenic

Concentration	Reading
0	-0.000012
0.4	0.39993
0.5	0.50301
1	0.991897

correlation coefficient = Recalculated Reported
 0.999966148 0.99997

Laboratory: Severn Trent

SDG: 500-5352-1

Lead

Concentration	Reading
0	-0.000025
0.4	0.403786
0.5	0.503941
1	0.997331

correlation coefficient = Recalculated Reported
 0.999974453 0.99995

Laboratory: Severn Trent

SDG: 500-5529-1

Arsenic

Concentration	Reading
0	0.000029
0.4	0.391399
0.5	0.50633
1	1.00658

correlation coefficient = Recalculated Reported
 0.99988651 0.99989

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-5427-1

Arsenic

Concentration	Reading
0	-0.000008
0.4	0.394539
0.5	0.50672
1	0.997954

correlation coefficient = Recalculated Reported
 0.999922488 0.99992

Laboratory: Severn Trent

SDG: 500-5427-1

Barium

Concentration	Reading
0	0.000013
0.4	0.395753
0.5	0.504003
1	1.00275

correlation coefficient = Recalculated Reported
 0.999967483 0.99997

Laboratory: Severn Trent

SDG: 500-5427-1

Cadmium

Concentration	Reading
0	0.000011
0.4	0.394062
0.5	0.507957
1	1.00051

correlation coefficient = Recalculated Reported
 0.999906161 0.99991

Laboratory: Severn Trent

SDG: 500-5427-1

Copper

Concentration	Reading
0	0.000024
0.4	0.394306
0.5	0.503354
1	1.00776

correlation coefficient = Recalculated Reported
 0.999946525 0.99995

Laboratory: Severn Trent

SDG: 500-5427-1

Lead

Concentration	Reading
0	0.000019
0.4	0.391434
0.5	0.511239
1	1.0051

correlation coefficient = Recalculated Reported
 0.999820237 0.99985

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-6332-1

Copper

Concentration	Reading
0	-0.000004
0.4	0.397489
0.5	0.506121
1	0.994265

correlation coefficient = Recalculated 0.999938766 Reported 0.99994

Laboratory: Severn Trent

SDG: 500-6332-1

Lead

Concentration	Reading
0	0.000006
0.4	0.395954
0.5	0.507877
1	1.00439

correlation coefficient = Recalculated 0.999936381 Reported 0.99996

Laboratory: Severn Trent

SDG: 500-6332-1

Silver

Concentration	Reading
0	0.000008
0.4	0.395263
0.5	0.506478
1	0.998885

correlation coefficient = Recalculated 0.99993542 Reported 0.99994

Laboratory: Severn Trent

SDG: 500-6332-1

Thallium

Concentration	Reading
0	0.000016
0.4	0.393928
0.5	0.510349
1	1.00346

correlation coefficient = Recalculated 0.999874796 Reported 0.99987

Laboratory: Severn Trent

SDG: 500-6332-1

Zinc

Concentration	Reading
0	0.000002
0.4	0.394521
0.5	0.509639
1	0.994845

correlation coefficient = Recalculated 0.999860048 Reported 0.99986

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-6356-1

Arsenic

Concentration	Reading
0	0.000005
0.4	0.394521
0.5	0.50778
1	0.995878

correlation coefficient = Recalculated Reported
0.999898988 0.99990

Laboratory: Severn Trent

SDG: 500-6412-1

Lead

Concentration	Reading
0	0.000000
0.4	0.397939
0.5	0.50596
1	1.00342

correlation coefficient = Recalculated Reported
0.999971282 0.99998

Laboratory: Severn Trent

SDG: 500-6444-1

Arsenic

Concentration	Reading
0	0.000012
0.4	0.395811
0.5	0.503319
1	1.00158

correlation coefficient = Recalculated Reported
0.999972555 0.99997

Laboratory: Severn Trent

SDG: 500-6444-1

Copper

Concentration	Reading
0	0.000004
0.4	0.397126
0.5	0.504259
1	0.998896

correlation coefficient = Recalculated Reported
0.999972914 0.99997

Laboratory: Severn Trent

SDG: 500-6444-1

Lead

Concentration	Reading
0	-0.000017
0.4	0.400405
0.5	0.506925
1	0.995863

correlation coefficient = Recalculated Reported
0.999945717 0.99994

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-6444-1

Zinc

Concentration	Reading
0	-0.000005
0.4	0.398197
0.5	0.505048
1	0.994834

correlation coefficient = Recalculated Reported
0.999957543 0.99996

Laboratory: Severn Trent

SDG: 500-6467-1

Arsenic

Concentration	Reading
0	0.000012
0.4	0.397208
0.5	0.500745
1	1.00323

correlation coefficient = Recalculated Reported
0.999989071 0.99999

Laboratory: Severn Trent

SDG: 500-6467-1

Copper

Concentration	Reading
0	-0.000000
0.4	0.398929
0.5	0.502215
1	0.998475

correlation coefficient = Recalculated Reported
0.999984032 0.99999

Laboratory: Severn Trent

SDG: 500-6467-1

Lead

Concentration	Reading
0	0.000018
0.4	0.395039
0.5	0.506212
1	1.01079

correlation coefficient = Recalculated Reported
0.999934685 0.99997

Laboratory: Severn Trent

SDG: 500-6467-1

Zinc

Concentration	Reading
0	0.000006
0.4	0.398827
0.5	0.501647
1	1.00156

correlation coefficient = Recalculated Reported
0.999996348 0.99999

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-6503-1

Lead

Concentration	Reading
0	-0.000012
0.4	0.401584
0.5	0.50297
1	1.00081

correlation coefficient =	Recalculated 0.999995543	Reported 0.99999
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Laboratory: Severn Trent

SDG: 500-6506-1

Copper

Concentration	Reading
0	-0.000007
0.4	0.400439
0.5	0.501284
1	0.996563

correlation coefficient =	Recalculated 0.999993534	Reported 0.99999
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Laboratory: Severn Trent

SDG: 500-6506-1

Lead

Concentration	Reading
0	-0.000012
0.4	0.401584
0.5	0.50297
1	1.00081

correlation coefficient =	Recalculated 0.999995543	Reported 0.99999
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Laboratory: Severn Trent

SDG: 500-6506-1

Silver

Concentration	Reading
0	0.000001
0.4	0.39876
0.5	0.501903
1	0.999296

correlation coefficient =	Recalculated 0.999994527	Reported 0.99999
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Laboratory: Severn Trent

SDG: 500-6506-1

Zinc

Concentration	Reading
0	0.000001
0.4	0.399012
0.5	0.501621
1	0.99965

correlation coefficient =	Recalculated 0.999996357	Reported 0.99993 1.00000
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Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-6592-1

Copper

Concentration	Reading
0	-0.000002
0.4	0.397577
0.5	0.505122
1	0.996043

correlation coefficient =	Recalculated 0.999959111	Reported 0.99996
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Laboratory: Severn Trent

SDG: 500-6592-1

Lead

Concentration	Reading
0	-0.000007
0.4	0.399773
0.5	0.505081
1	1.00114

correlation coefficient =	Recalculated 0.999983192	Reported 0.99999
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Laboratory: Severn Trent

SDG: 500-6592-1

Silver

Concentration	Reading
0	-0.000001
0.4	0.397932
0.5	0.504163
1	0.996845

correlation coefficient =	Recalculated 0.999972821	Reported 0.99997
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Laboratory: Severn Trent

SDG: 500-6592-1

Zinc

Concentration	Reading
0	-0.000007
0.4	0.397841
0.5	0.506383
1	0.993055

correlation coefficient =	Recalculated 0.99993009	Reported 0.99993
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Laboratory: Severn Trent

SDG: 500-6621-1

Lead

Concentration	Reading
0	-0.000007
0.4	0.399574
0.5	0.5053
1	1.0012

correlation coefficient =	Recalculated 0.999981089	Reported 0.99999
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Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-6622-1

Chromium

Concentration	Reading
0	0.000003
0.4	0.396691
0.5	0.505327
1	0.997498

correlation coefficient =	Recalculated 0.99995668	Reported 0.99996
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Laboratory: Severn Trent

SDG: 500-6622-1

Lead

Concentration	Reading
0	-0.000007
0.4	0.399574
0.5	0.5053
1	1.0012

correlation coefficient =	Recalculated 0.999981089	Reported 0.99999
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Laboratory: Severn Trent

SDG: 500-6650-1

Chromium

Concentration	Reading
0	-0.000012
0.4	0.399132
0.5	0.505261
1	0.991529

correlation coefficient =	Recalculated 0.999939389	Reported 0.99994
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Laboratory: Severn Trent

SDG: 500-6650-1

Copper

Concentration	Reading
0	-0.000017
0.4	0.39964
0.5	0.506139
1	0.988852

correlation coefficient =	Recalculated 0.999907692	Reported 0.99991
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Laboratory: Severn Trent

SDG: 500-6650-1

Lead

Concentration	Reading
0	-0.000022
0.4	0.40195
0.5	0.505526
1	0.994772

correlation coefficient =	Recalculated 0.999954573	Reported 0.99994
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Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-6651-1

Lead

Concentration	Reading
0	-0.000022
0.4	0.40195
0.5	0.505526
1	0.994772

correlation coefficient = Recalculated Reported
 0.999954573 0.99994

Laboratory: Severn Trent

SDG: 500-6687-1

Lead

Concentration	Reading
0	-0.000011
0.4	0.397655
0.5	0.510342
1	0.995948

correlation coefficient = Recalculated Reported
 0.999881606 0.99989

Laboratory: Severn Trent

SDG: 500-6713-1

Arsenic

Concentration	Reading
0	0.000021
0.4	0.395521
0.5	0.501929
1	1.00734

correlation coefficient = Recalculated Reported
 0.999964484 0.99996

Laboratory: Severn Trent

SDG: 500-6713-1

Barium

Concentration	Reading
0	0.000011
0.4	0.396686
0.5	0.502626
1	1.00303

correlation coefficient = Recalculated Reported
 0.999981847 0.99998

Laboratory: Severn Trent

SDG: 500-6713-1

Cadmium

Concentration	Reading
0	0.000014
0.4	0.395803
0.5	0.504052
1	1.00402

correlation coefficient = Recalculated Reported
 0.999966931 0.99997

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-6713-1

Chromium

Concentration	Reading
0	0.000019
0.4	0.394881
0.5	0.503509
1	1.00578

correlation coefficient =	Recalculated 0.999957788	Reported 0.99996
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Laboratory: Severn Trent

SDG: 500-6713-1

Lead

Concentration	Reading
0	0.000018
0.4	0.393741
0.5	0.507198
1	1.00799

correlation coefficient =	Recalculated 0.999914225	Reported 0.99994
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Laboratory: Severn Trent

SDG: 500-6713-1

Mercury

Concentration	Reading
0	-0.054
0.2	0.19
0.5	0.54
1	1.069
3	2.934
5	5.023

correlation coefficient =	Recalculated 0.999636573	Reported 0.99996
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Laboratory: Severn Trent

SDG: 500-6713-1

Silver

Concentration	Reading
0	0.00002
0.4	0.395542
0.5	0.502064
1	1.00702

correlation coefficient =	Recalculated 0.999965573	Reported 0.99997
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Laboratory: Severn Trent

SDG: 500-6713-1

Selenium

Concentration	Reading
0	-0.000006
0.4	0.401807
0.5	0.4987
1	0.99906

correlation coefficient =	Recalculated 0.999995125	Reported 0.99999
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Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-6714-1

Copper

Concentration	Reading
0	-0.000011
0.4	0.402107
0.5	0.499676
1	0.99561

correlation coefficient = Recalculated Reported
 0.99989928 0.99999

Laboratory: Severn Trent

SDG: 500-6714-1

Lead

Concentration	Reading
0	0.000006
0.4	0.400483
0.5	0.499402
1	1.01071

correlation coefficient = Recalculated Reported
 0.999974847 0.99998

Laboratory: Severn Trent

SDG: 500-6714-1

Zinc

Concentration	Reading
0	-0.000004
0.4	0.400652
0.5	0.500136
1	0.998519

correlation coefficient = Recalculated Reported
 0.999998827 1.00000

Laboratory: Severn Trent

SDG: 500-6743-1

Copper

Concentration	Reading
0	-0.000004
0.4	0.398486
0.5	0.504294
1	0.995428

correlation coefficient = Recalculated Reported
 0.999968714 0.99997

Laboratory: Severn Trent

SDG: 500-6750-1

Lead

Concentration	Reading
0	-0.000024
0.4	0.398287
0.5	0.513225
1	0.988592

correlation coefficient = Recalculated Reported
 0.999750392 0.99998

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-6812-1

Arsenic

Concentration	Reading
0	-0.000002
0.4	0.394522
0.5	0.509969
1	0.991498

	Recalculated	Reported
correlation coefficient =	0.999830861	0.99983

Laboratory: Severn Trent

SDG: 500-6812-1

Barium

Concentration	Reading
0	-0.000001
0.4	0.396702
0.5	0.50647
1	0.995444

	Recalculated	Reported
correlation coefficient =	0.999935193	0.99994

Laboratory: Severn Trent

SDG: 500-6812-1

Copper

Concentration	Reading
0	0.000006
0.4	0.395721
0.5	0.506108
1	0.998712

	Recalculated	Reported
correlation coefficient =	0.999943685	0.99994

Laboratory: Severn Trent

SDG: 500-6812-1

Lead

Concentration	Reading
0	0.000003
0.4	0.39412
0.5	0.512604
1	1.00032

	Recalculated	Reported
correlation coefficient =	0.999823894	0.99986

Laboratory: Severn Trent

SDG: 500-6812-1

Zinc

Concentration	Reading
0	-0.000016
0.4	0.393323
0.5	0.517714
1	0.98169

	Recalculated	Reported
correlation coefficient =	0.999457419	0.99946

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 99 of 103)

Laboratory: Severn Trent

SDG: 500-6900-1

Lead

Concentration	Reading
0	0.000011
0.4	0.395621
0.5	0.507071
1	1.00771

correlation coefficient =	Recalculated 0.999941203	Reported 0.99997
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Laboratory: Severn Trent

SDG: 500-7025-1

Lead

Concentration	Reading
0	-0.000007
0.4	0.400372
0.5	0.502687
1	1.00035

correlation coefficient =	Recalculated 0.999995584	Reported 0.99999
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Laboratory: Severn Trent

SDG: 500-7026-1

Lead

Concentration	Reading
0	-0.000009
0.4	0.398908
0.5	0.507255
1	0.999071

correlation coefficient =	Recalculated 0.999952898	Reported 0.99996
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Laboratory: Severn Trent

SDG: 500-7047-1

Arsenic

Concentration	Reading
0	0.000027
0.4	0.392696
0.5	0.504218
1	1.00756

correlation coefficient =	Recalculated 0.999921284	Reported 0.99992
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Laboratory: Severn Trent

SDG: 500-7047-1

Barium

Concentration	Reading
0	0.000005
0.4	0.397116
0.5	0.503825
1	0.999701

correlation coefficient =	Recalculated 0.999977466	Reported 0.99998
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Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-7047-1

Chromium

Concentration	Reading
0	-0.000001
0.4	0.398592
0.5	0.502866
1	0.997667

correlation coefficient =	Recalculated 0.999986855	Reported 0.99999
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Laboratory: Severn Trent

SDG: 500-7047-1

Copper

Concentration	Reading
0	0.000011
0.4	0.3963
0.5	0.503681
1	1.00212

correlation coefficient =	Recalculated 0.999974221	Reported 0.99997
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Laboratory: Severn Trent

SDG: 500-7047-1

Lead

Concentration	Reading
0	-0.000002
0.4	0.398588
0.5	0.505691
1	1.00301

correlation coefficient =	Recalculated 0.999976944	Reported 0.99999
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Laboratory: Severn Trent

SDG: 500-7047-1

Silver

Concentration	Reading
0	0.000005
0.4	0.397603
0.5	0.502995
1	1

correlation coefficient =	Recalculated 0.999985729	Reported 0.99999
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Laboratory: Severn Trent

SDG: 500-7047-1

Zinc

Concentration	Reading
0	-0.000000
0.4	0.398173
0.5	0.503593
1	0.997804

correlation coefficient =	Recalculated 0.999957441	Reported 0.99998
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Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-7145-1

Lead

Concentration	Reading
0	-0.000015
0.4	0.402814
0.5	0.501663
1	1.00043

correlation coefficient =	Recalculated 0.999995195	Reported 0.99998
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Laboratory: Severn Trent

SDG: 500-7162-1

Lead

Concentration	Reading
0	0.000014
0.4	0.396834
0.5	0.503967
1	1.01087

correlation coefficient =	Recalculated 0.999963462	Reported 0.99998
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Laboratory: Severn Trent

SDG: 500-7513-1

Lead

Concentration	Reading
0	0.000041
0.4	0.390714
0.5	0.506698
1	1.01947

correlation coefficient =	Recalculated 0.999813897	Reported 0.99986
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Laboratory: Severn Trent

SDG: 500-7607-1

Lead

Concentration	Reading
0	0.000015
0.4	0.395402
0.5	0.50564
1	1.00789

correlation coefficient =	Recalculated 0.999948613	Reported 0.99997
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Laboratory: Severn Trent

SDG: 500-14347

Antimony

Concentration	Reading
0	-0.00086
0.4	0.408643
0.5	0.51455
1	0.958433

correlation coefficient =	Recalculated 0.998932185	Reported 0.99896
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Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 102 of 103)

Laboratory: Severn Trent

SDG: 500-14347

Arsenic

Concentration	Reading
0	-0.000084
0.4	0.404148
0.5	0.518329
1	0.952973

correlation coefficient = Recalculated 0.998664756 Reported 0.99866

Laboratory: Severn Trent

SDG: 500-14347

Cadmium

Concentration	Reading
0	-0.000081
0.4	0.405706
0.5	0.515071
1	0.957559

correlation coefficient = Recalculated 0.998963274 Reported 0.99896

Laboratory: Severn Trent

SDG: 500-14347

Chromium

Concentration	Reading
0	-0.000083
0.4	0.405239
0.5	0.516031
1	0.954842

correlation coefficient = Recalculated 0.998834715 Reported 0.99883

Laboratory: Severn Trent

SDG: 500-14347

Copper

Concentration	Reading
0	-0.000064
0.4	0.403804
0.5	0.512741
1	0.965007

correlation coefficient = Recalculated 0.999305978 Reported 0.99931

Laboratory: Severn Trent

SDG: 500-14347

Lead

Concentration	Reading
0	-0.000082
0.4	0.407753
0.5	0.512264
1	0.963065

correlation coefficient = Recalculated 0.999208382 Reported 0.99917

Laboratory: Severn Trent

SDG: 500-14347

Zinc

Concentration	Reading
0	-0.000096
0.4	0.406839
0.5	0.519455
1	0.949911

correlation coefficient = Recalculated 0.998435793 Reported 0.99843

Table I-1

Metals Initial Calibration Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: 500-14347

Thallium

Concentration	Reading
0	-0.000074
0.4	0.40555
0.5	0.515588
1	0.961662

correlation coefficient =	Recalculated 0.999070407	Reported 0.99907
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Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 19)

Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
Soil Metals Samples (mg/kg)										
247739	Lead	0.41071	100	1	0.1	410.71	400	102.68	410.70	103
247739	Zinc	0.40604	100	1	0.1	406.04	400	101.51	406.04	102
247748	Arsenic	0.40446	100	1	0.1	404.46	400	101.12	404.46	101
247748	Copper	0.40363	100	1	0.1	403.63	400	100.91	403.63	101
247748	Lead	0.40781	100	1	0.1	407.81	400	101.95	407.80	102
247748	Zinc	0.39534	100	1	0.1	395.34	400	98.84	395.34	99
247836	Lead	0.40681	100	1	0.1	406.81	400	101.70	406.81	102
247884	Antimony	0.40606	100	1	0.1	406.06	400	101.52	404.06	101
247884	Copper	0.40595	100	1	0.1	405.95	400	101.49	405.95	101
247884	Lead	0.41358	100	1	0.1	413.58	400	103.40	413.58	103
247884	Silver	0.40780	100	1	0.1	407.8	400	101.95	407.80	102
247884	Thallium	0.41572	100	1	0.1	415.72	400	103.93	415.72	104
247884	Zinc	0.39965	100	1	0.1	399.65	400	99.91	399.65	100
248048	Lead	0.40424	100	1	0.1	404.24	400	101.06	404.24	101
248048	Zinc	0.38138	100	1	0.1	381.38	400	95.35	381.38	95
248301	Lead	0.40582	100	1	0.1	405.82	400	101.46	405.82	101
248307	Copper	0.39644	100	1	0.1	396.44	400	99.11	396.11	99
248926	Lead	0.41004	100	1	0.1	410.04	400	102.51	410.04	103
248927	Lead	0.40667	100	1	0.1	406.67	400	101.67	406.66	102
248981	Lead	0.41356	100	1	0.1	413.56	400	103.39	413.56	103
249025	Antimony	0.39451	100	1	0.1	394.51	400	98.63	394.50	99.0
249025	Barium	0.39532	100	1	0.1	395.32	400	98.83	395.32	99.0
249025	Copper	0.40000	100	1	0.1	400	400	100.00	399.99	100.0
249025	Lead	0.40667	100	1	0.1	406.67	400	101.67	406.66	102.0
249025	Thallium	0.39887	100	1	0.1	398.87	400	99.72	398.87	100.0
249025	Zinc	0.38482	100	1	0.1	384.82	400	96.21	384.82	96.0
249049	Lead	0.40854	100	1	0.1	408.54	400	102.14	408.54	102
249072	Lead	0.41124	100	1	0.1	411.24	400	102.81	411.24	103

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
249144	Lead	0.41204	100	1	0.1	412.04	400	103.01	412.04	103
249145	Lead	0.41204	100	1	0.1	412.04	400	103.01	412.04	103
249177	Lead	0.40797	100	1	0.1	407.97	400	101.99	407.96	102
249177	Zinc	0.39803	100	1	0.1	398.03	400	99.51	398.03	100
249220	Lead	0.41487	100	1	0.1	414.87	400	103.72	414.86	104
249221	Lead	0.41487	100	1	0.1	414.87	400	103.72	414.86	104
249240	Lead	0.41487	100	1	0.1	414.87	400	103.72	414.86	104
249398	Lead	0.41584	100	1	0.1	415.84	400	103.96	415.84	104
249398	Arsenic	0.40130	100	1	0.1	401.3	400	100.33	401.30	100
249398	Cadmium	0.40077	100	1	0.1	400.77	400	100.19	400.77	100
249398	Copper	0.40209	100	1	0.1	402.09	400	100.52	402.08	101
249398	Lead	0.41782	100	1	0.1	417.82	400	104.46	417.82	104
249510	Lead	0.41944	100	1	0.1	419.44	400	104.86	419.44	105
249511	Lead	0.41944	100	1	0.1	419.44	400	104.86	419.44	105
249544	Lead	0.41123	100	1	0.1	411.23	400	102.81	411.22	103
249563	Lead	0.41312	100	1	0.1	413.12	400	103.28	413.11	103
249576	Lead	0.42083	100	1	0.1	420.83	400	105.21	420.83	105
249602	Lead	0.41970	100	1	0.1	419.7	400	104.93	419.69	105
249616	Lead	0.42281	100	1	0.1	422.81	400	105.70	422.80	106
249623	Lead	0.42015	100	1	0.1	420.15	400	105.04	420.15	105
249674	Lead	0.41825	100	1	0.1	418.25	400	104.56	418.24	105
249743	Lead	0.42089	100	1	0.1	420.89	400	105.22	420.89	105
249754	Lead	0.40181	100	1	0.1	401.81	400	100.45	411.08	103
249777	Lead	0.39786	100	1	0.1	397.86	400	99.47	397.85	99
249777	Lead	0.41914	100	1	0.1	419.14	400	104.79	419.14	105
249895	Lead	0.41503	100	1	0.1	415.03	400	103.76	415.02	104
249944	Arsenic	0.40322	100	1	0.1	403.22	400	100.81	403.21	101
249944	Cadmium	0.40693	100	1	0.1	406.93	400	101.73	406.92	102
249944	Copper	0.40673	100	1	0.1	406.73	400	101.68	406.73	102

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
249944	Lead	0.41651	100	1	0.1	416.51	400	104.13	416.50	104
250183	Lead	0.40603	100	1	0.1	406.03	400	101.51	406.02	102
250224	Antimony	0.39541	100	1	0.1	395.41	400	98.85	395.40	99
250224	Barium	0.38971	100	1	0.1	389.71	400	97.43	389.71	97
250224	Copper	0.39685	100	1	0.1	396.85	400	99.21	396.85	99
250224	Lead	0.42065	100	1	0.1	420.65	400	105.16	420.64	105
250224	Thallium	0.40472	100	1	0.1	404.72	400	101.18	404.71	101
250224	Zinc	0.39651	100	1	0.1	396.51	400	99.13	396.51	99
250224	Arsenic	0.39910	100	1	0.1	399.1	400	99.78	399.09	100
250224	Silver	0.39253	100	1	0.1	392.53	400	98.13	392.52	98
250263	Arsenic	0.38826	100	1	0.1	388.26	400	97.07	388.26	97
250263	Cadmium	0.39011	100	1	0.1	390.11	400	97.53	390.10	98
250263	Copper	0.39846	100	1	0.1	398.46	400	99.62	398.46	100
250263	Lead	0.39464	100	1	0.1	394.64	400	98.66	394.64	99
250263	Silver	0.39305	100	1	0.1	393.05	400	98.26	393.04	98
250263	Zinc	0.38460	100	1	0.1	384.6	400	96.15	384.59	96
250373	Arsenic	0.40090	100	1	0.1	400.9	400	100.23	400.90	100
250373	Cadmium	0.40278	100	1	0.1	402.78	400	100.70	402.78	101
250373	Copper	0.39807	100	1	0.1	398.07	400	99.52	398.07	100
250373	Lead	0.40516	100	1	0.1	405.16	400	101.29	405.15	101
250373	Silver	0.39024	100	1	0.1	390.24	400	97.56	390.23	98
250373	Zinc	0.38810	100	1	0.1	388.1	400	97.03	388.09	97
250387	Copper	0.38786	100	1	0.1	387.86	400	96.97	387.85	97
250399	Arsenic	0.38835	100	1	0.1	388.35	400	97.09	388.35	97
250399	Cadmium	0.40102	100	1	0.1	401.02	400	100.26	401.02	100
250399	Copper	0.40038	100	1	0.1	400.38	400	100.10	400.38	100
250399	Silver	0.39088	100	1	0.1	390.88	400	97.72	390.88	98
250399	Zinc	0.37824	100	1	0.1	378.24	400	94.56	378.23	95
250399	Lead	0.41019	100	1	0.1	410.19	400	102.55	410.18	103

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250415	Arsenic	0.40310	100	1	0.1	403.1	400	100.78	403.10	101
250415	Cadmium	0.40381	100	1	0.1	403.81	400	100.95	403.81	101
250415	Copper	0.40931	100	1	0.1	409.31	400	102.33	409.30	102
250415	Lead	0.41884	100	1	0.1	418.84	400	104.71	418.84	105
250415	Silver	0.39641	100	1	0.1	396.41	400	99.10	396.41	99
250415	Zinc	0.40156	100	1	0.1	401.56	400	100.39	401.55	100
250418	Arsenic	0.39278	100	1	0.1	392.78	400	98.20	392.78	98
250418	Cadmium	0.39059	100	1	0.1	390.59	400	97.65	390.58	98
250418	Copper	0.39751	100	1	0.1	397.51	400	99.38	397.51	99
250418	Lead	0.40682	100	1	0.1	406.82	400	101.71	406.81	102
250418	Silver	0.39232	100	1	0.1	392.32	400	98.08	392.32	98
250418	Zinc	0.40629	100	1	0.1	406.29	400	101.57	406.29	102
250429	Copper	0.40782	100	1	0.1	407.82	400	101.96	407.82	102
250429	Zinc	0.41191	100	1	0.1	411.91	400	102.98	411.90	103
250431	Arsenic	0.40206	100	1	0.1	402.06	400	100.52	402.06	101
250431	Cadmium	0.40781	100	1	0.1	407.81	400	101.95	407.81	102
250431	Copper	0.40782	100	1	0.1	407.82	400	101.96	407.82	102
250431	Lead	0.42018	100	1	0.1	420.18	400	105.05	420.18	105
250431	Silver	0.40370	100	1	0.1	403.7	400	100.93	403.70	101
250431	Zinc	0.41191	100	1	0.1	411.91	400	102.98	411.90	103
250051	Chromium	0.40070	100	1	0.1	400.7	400	100.18	400.70	100
250051	Copper	0.38991	100	1	0.1	389.91	400	97.48	389.90	97
250051	Lead	0.41477	100	1	0.1	414.77	400	103.69	414.76	104
250051	Silver	0.39179	100	1	0.1	391.79	400	97.95	391.79	98
250051	Zinc	0.40276	100	1	0.1	402.76	400	100.69	402.75	101
250051	Zinc	0.39013	100	1	0.1	390.13	400	97.53	390.13	98
250164	Lead	0.39974	100	1	0.1	399.74	400	99.94	399.73	100
250165	Antimony	0.39457	100	1	0.1	394.57	400	98.64	394.56	99
250165	Copper	0.40502	100	1	0.1	405.02	400	101.26	405.01	101

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250165	Lead	0.39974	100	1	0.1	399.74	400	99.94	399.73	100
250165	Silver	0.39774	100	1	0.1	397.74	400	99.44	397.74	99
250165	Thallium	0.39822	100	1	0.1	398.22	400	99.56	398.22	100
250165	Zinc	0.38377	100	1	0.1	383.77	400	95.94	383.77	96
250165	Lead	0.40212	100	1	0.1	402.12	400	100.53	402.11	101
250443	Arsenic	0.38787	100	1	0.1	387.87	400	96.97	387.87	97
250443	Cadmium	0.39158	100	1	0.1	391.58	400	97.90	391.57	98
250443	Copper	0.39837	100	1	0.1	398.37	400	99.59	398.36	100
250443	Lead	0.42894	100	1	0.1	428.94	400	107.24	428.93	107
250443	Silver	0.38948	100	1	0.1	389.48	400	97.37	389.47	97
250443	Zinc	0.38717	100	1	0.1	387.17	400	96.79	387.16	97
250472	Antimony	0.41276	100	1	0.1	412.76	400	103.19	412.76	103
250472	Arsenic	0.41804	100	1	0.1	418.04	400	104.51	418.04	105
250472	Barium	0.40756	100	1	0.1	407.56	400	101.89	407.55	102
250472	Chromium	0.41527	100	1	0.1	415.27	400	103.82	415.26	104
250472	Copper	0.41250	100	1	0.1	412.5	400	103.13	412.50	103
250472	Lead	0.42158	100	1	0.1	421.58	400	105.40	421.57	105
250472	Nickel	0.41853	100	1	0.1	418.53	400	104.63	418.53	105
250472	Zinc	0.41726	100	1	0.1	417.26	400	104.32	417.25	104
250479	Antimony	0.38984	100	1	0.1	389.84	400	97.46	389.83	97
250479	Arsenic	0.39317	100	1	0.1	393.17	400	98.29	393.17	98
250479	Barium	0.38593	100	1	0.1	385.93	400	96.48	385.93	96
250479	Chromium	0.39351	100	1	0.1	393.51	400	98.38	393.51	98
250479	Copper	0.39560	100	1	0.1	395.6	400	98.90	395.59	99
250479	Lead	0.40483	100	1	0.1	404.83	400	101.21	404.82	101
250479	Nickel	0.39658	100	1	0.1	396.58	400	99.15	396.58	99
250479	Zinc	0.39412	100	1	0.1	394.12	400	98.53	394.11	99
250483	Antimony	0.39417	100	1	0.1	394.17	400	98.54	394.17	99
250483	Arsenic	0.39572	100	1	0.1	395.72	400	98.93	395.72	99

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250483	Barium	0.39363	100	1	0.1	393.63	400	98.41	393.62	98
250483	Chromium	0.39463	100	1	0.1	394.63	400	98.66	394.62	99
250483	Copper	0.40104	100	1	0.1	401.04	400	100.26	401.04	100
250483	Lead	0.40475	100	1	0.1	404.75	400	101.19	404.75	101
250483	Nickel	0.39757	100	1	0.1	397.57	400	99.39	397.57	99
250483	Zinc	0.39524	100	1	0.1	395.24	400	98.81	395.23	99
250504	Antimony	0.38887	100	1	0.1	388.87	400	97.22	388.87	97
250504	Arsenic	0.38999	100	1	0.1	389.99	400	97.50	389.99	97
250504	Barium	0.38794	100	1	0.1	387.94	400	96.99	387.94	97
250504	Chromium	0.38628	100	1	0.1	386.28	400	96.57	386.28	97
250504	Copper	0.39560	100	1	0.1	395.6	400	98.90	395.60	99
250504	Lead	0.39734	100	1	0.1	397.34	400	99.34	397.34	99
250504	Nickel	0.38921	100	1	0.1	389.21	400	97.30	389.20	97
250504	Zinc	0.38244	100	1	0.1	382.44	400	95.61	382.43	96
250523	Antimony	0.38932	100	1	0.1	389.32	400	97.33	389.32	97
250523	Arsenic	0.38820	100	1	0.1	388.2	400	97.05	388.19	97
250523	Barium	0.38971	100	1	0.1	389.71	400	97.43	389.71	97
250523	Chromium	0.38651	100	1	0.1	386.51	400	96.63	386.50	97
250523	Copper	0.39878	100	1	0.1	398.78	400	99.70	398.78	100
250523	Lead	0.40853	100	1	0.1	408.53	400	102.13	408.53	102
250523	Nickel	0.38846	100	1	0.1	388.46	400	97.12	388.46	97
250523	Zinc	0.38141	100	1	0.1	381.41	400	95.35	381.40	95
250534	Antimony	0.40180	100	1	0.1	401.8	400	100.45	401.80	100
250534	Barium	0.40022	100	1	0.1	400.22	400	100.06	400.21	100
250534	Chromium	0.39783	100	1	0.1	397.83	400	99.46	397.83	99
250534	Lead	0.41721	100	1	0.1	417.21	400	104.30	417.20	104
250534	Zinc	0.39140	100	1	0.1	391.4	400	97.85	391.39	98
250536	Antimony	0.39982	100	1	0.1	399.82	400	99.96	399.81	100
250536	Barium	0.39638	100	1	0.1	396.38	400	99.10	396.37	99

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Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250536	Chromium	0.39842	100	1	0.1	398.42	400	99.61	398.41	100
250536	Lead	0.40770	100	1	0.1	407.7	400	101.93	407.69	102
250536	Zinc	0.39571	100	1	0.1	395.71	400	98.93	395.71	99
250541	Lead	0.42304	100	1	0.1	423.04	400	105.76	423.03	106
250548	Lead	0.40239	100	1	0.1	402.39	400	100.60	402.39	101
250551	Arsenic	0.39684	100	1	0.1	396.84	400	99.21	396.83	99
250557	Zinc	0.39675	100	1	0.1	396.75	400	99.19	396.75	99
250560	Antimony	0.38893	100	1	0.1	388.93	400	97.23	388.92	97
250560	Barium	0.38759	100	1	0.1	387.59	400	96.90	387.58	97
250560	Chromium	0.39158	100	1	0.1	391.58	400	97.90	391.58	98
250560	Lead	0.40875	100	1	0.1	408.75	400	102.19	408.75	102
250560	Zinc	0.38647	100	1	0.1	386.47	400	96.62	386.47	97
250573	Antimony	0.39614	100	1	0.1	396.14	400	99.04	396.13	99
250573	Barium	0.39864	100	1	0.1	398.64	400	99.66	398.64	100
250573	Chromium	0.40603	100	1	0.1	406.03	400	101.51	406.02	102
250573	Lead	0.42264	100	1	0.1	422.64	400	105.66	422.63	106
250573	Zinc	0.40415	100	1	0.1	404.15	400	101.04	404.14	101
250595	Arsenic	0.40136	100	1	0.1	401.36	400	100.34	401.35	100
250595	Cadmium	0.40329	100	1	0.1	403.29	400	100.82	403.29	101
250595	Copper	0.41044	100	1	0.1	410.44	400	102.61	410.44	103
250595	Lead	0.41121	100	1	0.1	411.21	400	102.80	411.20	103
250595	Silver	0.40372	100	1	0.1	403.72	400	100.93	403.72	101
250595	Zinc	0.39782	100	1	0.1	397.82	400	99.46	397.82	99
250595	Copper	0.39856	100	1	0.1	398.56	400	99.64	398.56	100
250595	Zinc	0.38533	100	1	0.1	385.33	400	96.33	385.33	96
250597	Arsenic	0.39225	100	1	0.1	392.25	400	98.06	392.25	98
250597	Cadmium	0.39279	100	1	0.1	392.79	400	98.20	392.79	98
250597	Copper	0.40414	100	1	0.1	404.14	400	101.04	404.13	101
250597	Lead	0.41055	100	1	0.1	410.55	400	102.64	410.54	103

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
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 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250597	Silver	0.39535	100	1	0.1	395.35	400	98.84	395.35	99
250597	Zinc	0.38464	100	1	0.1	384.64	400	96.16	384.63	96
250603	Arsenic	0.39046	100	1	0.1	390.46	400	97.62	390.46	98
250603	Cadmium	0.39000	100	1	0.1	390	400	97.50	389.99	97
250603	Copper	0.39780	100	1	0.1	397.8	400	99.45	397.79	99
250603	Lead	0.40265	100	1	0.1	402.65	400	100.66	402.65	101
250603	Silver	0.37862	100	1	0.1	378.62	400	94.66	378.61	95
250603	Zinc	0.37917	100	1	0.1	379.17	400	94.79	379.16	95
250606	Arsenic	0.39320	100	1	0.1	393.2	400	98.30	393.20	98
250606	Cadmium	0.39447	100	1	0.1	394.47	400	98.62	394.46	99
250606	Copper	0.39615	100	1	0.1	396.15	400	99.04	396.14	99
250606	Lead	0.42172	100	1	0.1	421.72	400	105.43	421.72	105
250606	Silver	0.39369	100	1	0.1	393.69	400	98.42	393.69	98
250606	Zinc	0.39174	100	1	0.1	391.74	400	97.94	391.74	98
250606	Copper	0.40797	100	1	0.1	407.97	400	101.99	407.97	102
500-4287-1	Arsenic	0.39495	100	1	0.1	394.95	400	98.74	0.39	99
500-4287-1	Cadmium	0.39928	100	1	0.1	399.28	400	99.82	0.40	100
500-4287-1	Copper	0.40736	100	1	0.1	407.36	400	101.84	0.41	102
500-4287-1	Lead	0.41681	100	1	0.1	416.81	400	104.20	0.42	104
500-4287-1	Silver	0.41005	100	1	0.1	410.05	400	102.51	0.41	103
500-4287-1	Zinc	0.39182	100	1	0.1	391.82	400	97.96	0.39	98
500-4270-2	Arsenic	0.39682	100	1	0.1	396.82	400	99.21	0.40	99
500-4270-2	Cadmium	0.39705	100	1	0.1	397.05	400	99.26	0.40	99
500-4270-2	Copper	0.40059	100	1	0.1	400.59	400	100.15	0.40	100
500-4270-2	Lead	0.41894	100	1	0.1	418.94	400	104.74	0.42	105
500-4270-2	Silver	0.40011	100	1	0.1	400.11	400	100.03	0.40	100
500-4270-2	Zinc	0.39441	100	1	0.1	394.41	400	98.60	0.39	99
500-4317-4	Arsenic	0.39303	100	1	0.1	393.03	400	98.26	0.39	98
500-4317-4	Cadmium	0.39255	100	1	0.1	392.55	400	98.14	0.39	98

SDG - sample delivery group
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 ICP - inductively coupled plasma
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 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-4317-4	Copper	0.40259	100	1	0.1	402.59	400	100.65	0.40	101
500-4317-4	Lead	0.41052	100	1	0.1	410.52	400	102.63	0.41	103
500-4317-4	Silver	0.39205	100	1	0.1	392.05	400	98.01	0.39	98
500-4317-4	Zinc	0.38621	100	1	0.1	386.21	400	96.55	0.39	97
500-4362-1	Lead	0.41184	100	1	0.1	411.84	400	102.96	0.41	103
500-4427-1	Arsenic	0.38454	100	1	0.1	384.54	400	96.14	0.38	96
500-4427-1	Cadmium	0.38161	100	1	0.1	381.61	400	95.40	0.38	95
500-4427-1	Copper	0.39131	100	1	0.1	391.31	400	97.83	0.39	98
500-4427-1	Lead	0.39982	100	1	0.1	399.82	400	99.96	0.40	100
500-4427-1	Silver	0.38601	100	1	0.1	386.01	400	96.50	0.39	97
500-4427-1	Zinc	0.37642	100	1	0.1	376.42	400	94.11	0.38	94
500-4447-1	Lead	0.39367	100	1	0.1	393.67	400	98.42	0.39	98
500-4472-4	Copper	0.40141	100	1	0.1	401.41	400	100.35	0.40	100
500-4472-4	Lead	0.40611	100	1	0.1	406.11	400	101.53	0.41	102
500-4561-1	Arsenic	0.39703	100	1	0.1	397.03	400	99.26	0.40	99
500-4561-1	Cadmium	0.39720	100	1	0.1	397.2	400	99.30	0.40	99
500-4561-1	Copper	0.40141	100	1	0.1	401.41	400	100.35	0.40	100
500-4561-1	Lead	0.40687	100	1	0.1	406.87	400	101.72	0.41	102
500-4561-1	Silver	0.39221	100	1	0.1	392.21	400	98.05	0.39	98
500-4561-1	Zinc	0.39402	100	1	0.1	394.02	400	98.51	0.39	99
500-4599-2	Lead	0.41982	100	1	0.1	419.82	400	104.96	0.42	105
500-4602-2	Lead	0.41412	100	1	0.1	414.12	400	103.53	0.41	104
500-4630-1	Arsenic	0.39669	100	1	0.1	396.69	400	99.17	0.40	99
500-4630-1	Cadmium	0.39741	100	1	0.1	397.41	400	99.35	0.40	99
500-4630-1	Copper	0.40090	100	1	0.1	400.90	400	100.23	0.40	100
500-4630-1	Lead	0.42027	100	1	0.1	420.27	400	105.07	0.42	105
500-4630-1	Silver	0.39659	100	1	0.1	396.59	400	99.15	0.40	99
500-4630-1	Zinc	0.39941	100	1	0.1	399.41	400	99.85	0.40	100
500-4661-2	Lead	0.39338	100	1	0.1	393.38	400	98.35	0.39	98

SDG - sample delivery group
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Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-4662-2	Lead	0.39338	100	1	0.1	393.38	400	98.35	0.39	98
500-4685-1	Copper	0.40477	100	1	0.1	404.77	400	101.19	0.40	101
500-4685-1	Lead	0.41486	100	1	0.1	414.86	400	103.72	0.41	104
500-4685-1	Zinc	0.39277	100	1	0.1	392.77	400	98.19	0.39	98
500-4792-2	Lead	0.41069	100	1	0.1	410.69	400	102.67	0.41	103
500-4814-1	Lead	0.41697	100	1	0.1	416.97	400	104.24	0.42	104
500-4870-1	Lead	0.40300	100	1	0.1	403.00	400	100.75	0.40	101
500-4954-1	Lead	0.40993	100	1	0.1	409.93	400	102.48	0.41	102
500-5055-1	Antimony	0.39523	100	1	0.1	395.23	400	98.81	0.40	99
500-5122-1	Lead	0.40181	100	1	0.1	401.81	400	100.45	0.40	100
500-5265-1	Arsenic	0.40390	100	1	0.1	403.9	400	100.98	0.40	101
500-5265-1	Copper	0.40669	100	1	0.1	406.69	400	101.67	0.41	102
500-5265-1	Lead	0.40732	100	1	0.1	407.32	400	101.83	0.41	102
500-5265-1	Thallium	0.40574	100	1	0.1	405.74	400	101.44	0.41	101
500-5265-1	Zinc	0.39736	100	1	0.1	397.36	400	99.34	0.40	99
500-5285-1	Lead	0.41610	100	1	0.1	416.1	400	104.03	0.42	104
500-5286-1	Lead	0.40873	100	1	0.1	408.73	400	102.18	0.41	102
500-5306-1	Lead	0.39397	100	1	0.1	393.97	400	98.49	0.39	98
500-5347-1	Arsenic	0.39381	100	1	0.1	393.81	400	98.45	0.39	98
500-5352-1	Lead	0.41469	100	1	0.1	414.69	400	103.67	0.41	104
500-5499-1	Antimony	0.38508	100	1	0.1	385.08	400	96.27	0.40	96
500-5499-1	Arsenic	0.39229	100	1	0.1	392.29	400	98.07	0.39	98
500-5499-1	Cadmium	0.39509	100	1	0.1	395.09	400	98.77	0.40	99
500-5499-1	Copper	0.40110	100	1	0.1	401.1	400	100.28	0.40	100
500-5499-1	Lead	0.40570	100	1	0.1	405.7	400	101.43	0.41	101
500-5499-1	Silver	0.39633	100	1	0.1	396.33	400	99.08	0.39	99
500-5499-1	Thallium	0.39830	100	1	0.1	398.3	400	99.58	0.40	100
500-5499-1	Zinc	0.38242	100	1	0.1	382.42	400	95.61	0.38	96
500-5501-1	Antimony	0.38803	100	1	0.1	388.03	400	97.01	0.39	97

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Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-5501-1	Arsenic	0.39764	100	1	0.1	397.64	400	99.41	0.40	99
500-5501-1	Cadmium	0.39511	100	1	0.1	395.11	400	98.78	0.40	99
500-5501-1	Copper	0.40219	100	1	0.1	402.19	400	100.55	0.40	101
500-5501-1	Lead	0.40875	100	1	0.1	408.75	400	102.19	0.41	102
500-5501-1	Silver	0.39598	100	1	0.1	395.98	400	99.00	0.40	99
500-5501-1	Thallium	0.40327	100	1	0.1	403.27	400	100.82	0.40	101
500-5501-1	Zinc	0.38882	100	1	0.1	388.82	400	97.21	0.40	100
500-5658-1	Lead	0.49268	100	1	0.1	492.68	500	98.54	0.49	99
500-5681-1	Arsenic	0.40347	100	1	0.1	403.47	400	100.87	0.40	101
500-5681-1	Barium	0.38742	100	1	0.1	387.42	400	96.86	0.39	97
500-5681-1	Chromium	0.40595	100	1	0.1	405.95	400	101.49	0.41	101
500-5681-1	Copper	0.39699	100	1	0.1	396.99	400	99.25	0.40	99
500-5681-1	Lead	0.43368	100	1	0.1	433.68	400	108.42	0.43	108
500-5681-1	Silver	0.39683	100	1	0.1	396.83	400	99.21	0.40	99
500-5681-1	Zinc	0.41826	100	1	0.1	418.26	400	104.57	0.42	105
500-5719-1	Arsenic	0.39313	100	1	0.1	393.13	400	98.28	0.39	98
500-5719-1	Barium	0.39359	100	1	0.1	393.59	400	98.40	0.39	98
500-5719-1	Chromium	0.39481	100	1	0.1	394.81	400	98.70	0.39	99
500-5719-1	Copper	0.40545	100	1	0.1	405.45	400	101.36	0.41	101
500-5719-1	Lead	0.41692	100	1	0.1	416.92	400	104.23	0.42	104
500-5719-1	Silver	0.38829	100	1	0.1	388.29	400	97.07	0.39	97
500-5719-1	Zinc	0.39010	100	1	0.1	390.1	400	97.53	0.39	98
500-5720-1	Lead	0.41692	100	1	0.1	416.92	400	104.23	0.42	104
500-5767-1	Lead	0.42701	100	1	0.1	427.01	400	106.75	0.43	107
500-5933-1	Arsenic	0.39976	100	1	0.1	399.76	400	99.94	0.40	100
500-5933-1	Copper	0.40433	100	1	0.1	404.33	400	101.08	0.40	101
500-5933-1	Lead	0.42291	100	1	0.1	422.91	400	105.73	0.42	106
500-5933-1	Thallium	0.41101	100	1	0.1	411.01	400	102.75	0.41	103
500-5933-1	Zinc	0.39946	100	1	0.1	399.46	400	99.87	0.40	100

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-5954-1	Lead	0.42291	100	1	0.1	422.91	400	105.73	0.42	106
500-5975-1	Lead	0.40592	100	1	0.1	405.92	400	101.48	0.41	101
500-6015-1	Lead	0.41957	100	1	0.1	419.57	400	104.89	0.42	105
500-6017-1	Lead	0.41957	100	1	0.1	419.57	400	104.89	0.42	105
500-6018-1	Arsenic	0.40331	100	1	0.1	403.31	400	100.83	0.40	101
500-6078-1	Arsenic	0.38894	100	1	0.1	388.94	400	97.24	0.39	97
500-6079-1	Copper	0.39993	100	1	0.1	399.93	400	99.98	0.40	100
500-6079-1	Lead	0.40383	100	1	0.1	403.83	400	100.96	0.40	101
500-6079-1	Silver	0.38419	100	1	0.1	384.19	400	96.05	0.38	96
500-6079-1	Zinc	0.38433	100	1	0.1	384.33	400	96.08	0.38	96
500-6111-1	Lead	0.42265	100	1	0.1	422.65	400	105.66	0.42	106
500-6112-1	Antimony	0.39267	100	1	0.1	392.67	400	98.17	0.39	98
500-6112-1	Arsenic	0.39359	100	1	0.1	393.59	400	98.40	0.39	98
500-6112-1	Cadmium	0.39241	100	1	0.1	392.41	400	98.10	0.39	98
500-6112-1	Copper	0.39675	100	1	0.1	396.75	400	99.19	0.40	99
500-6112-1	Lead	0.42719	100	1	0.1	427.19	400	106.80	0.43	107
500-6112-1	Silver	0.39056	100	1	0.1	390.56	400	97.64	0.39	98
500-6112-1	Thallium	0.38689	100	1	0.1	386.89	400	96.72	0.39	97
500-6112-1	Zinc	0.39036	100	1	0.1	390.36	400	97.59	0.39	98
500-6133-1	Copper	0.40198	100	1	0.1	401.98	400	100.50	0.40	100
500-6133-1	Zinc	0.40114	100	1	0.1	401.14	400	100.29	0.40	100
500-6237-1	Arsenic	0.39690	100	1	0.1	396.9	400	99.23	0.40	99
500-6238-1	Copper	0.40320	100	1	0.1	403.2	400	100.80	0.40	101
500-6238-1	Lead	0.40783	100	1	0.1	407.83	400	101.96	0.41	102
500-6238-1	Silver	0.39289	100	1	0.1	392.89	400	98.22	0.39	98
500-6238-1	Zinc	0.39057	100	1	0.1	390.57	400	97.64	0.39	98
500-6262-1	Copper	0.39875	100	1	0.1	398.75	400	99.69	0.40	100
500-6262-1	Zinc	0.39262	100	1	0.1	392.62	400	98.16	0.39	98
500-6238-1	Arsenic	0.39345	100	1	0.1	393.45	400	98.36	0.39	98

SDG - sample delivery group
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 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-6332-1	Antimony	0.39004	100	1	0.1	390.04	400	97.51	0.39	98
500-6332-1	Arsenic	0.39036	100	1	0.1	390.36	400	97.59	0.39	98
500-6332-1	Cadmium	0.38425	100	1	0.1	384.25	400	96.06	0.38	96
500-6332-1	Copper	0.39681	100	1	0.1	396.81	400	99.20	0.40	99
500-6332-1	Lead	0.39205	100	1	0.1	392.05	400	98.01	0.39	98
500-6332-1	Silver	0.38854	100	1	0.1	388.54	400	97.14	0.39	98
500-6332-1	Thallium	0.38314	100	1	0.1	383.14	400	95.79	0.38	96
500-6332-1	Zinc	0.38464	100	1	0.1	384.64	400	96.16	0.38	96
500-6356-1	Arsenic	0.39036	100	1	0.1	390.36	400	97.59	0.39	98
500-6412-1	Lead	0.40106	100	1	0.1	401.06	400	100.27	0.40	100
500-6444-1	Arsenic	0.40000	100	1	0.1	400	400	100.00	0.40	100
500-6444-1	Copper	0.39963	100	1	0.1	399.63	400	99.91	0.40	100
500-6444-1	Lead	0.40854	100	1	0.1	408.54	400	102.14	0.41	102
500-6444-1	Zinc	0.40003	100	1	0.1	400.03	400	100.01	0.40	100
500-6467-1	Arsenic	0.40039	100	1	0.1	400.39	400	100.10	0.40	100
500-6467-1	Copper	0.40281	100	1	0.1	402.81	400	100.70	0.40	101
500-6467-1	Lead	0.41761	100	1	0.1	417.61	400	104.40	0.42	104
500-6467-1	Zinc	0.39650	100	1	0.1	396.5	400	99.13	0.40	99
500-6503-1	Lead	0.40317	100	1	0.1	403.17	400	100.79	0.40	101
500-6506-1	Copper	0.40380	100	1	0.1	403.8	400	100.95	0.40	101
500-6506-1	Lead	0.40317	100	1	0.1	403.17	400	100.79	0.40	101
500-6506-1	Silver	0.39774	100	1	0.1	397.74	400	99.44	0.40	99
500-6506-1	Zinc	0.39641	100	1	0.1	396.41	400	99.10	0.40	99
500-6513-1	Copper	0.39820	100	1	0.1	398.2	400	99.55	0.40	100
500-6550-1	Arsenic	0.39649	100	1	0.1	396.49	400	99.12	0.40	99
500-6592-1	Arsenic	0.39873	100	1	0.1	398.73	400	99.68	0.40	100
500-6592-1	Barium	0.39362	100	1	0.1	393.62	400	98.41	0.40	100
500-6592-1	Chromium	0.40037	100	1	0.1	400.37	400	100.09	0.40	101
500-6592-1	Copper	0.40221	100	1	0.1	402.21	400	100.55	0.41	102

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-6592-1	Lead	0.42190	100	1	0.1	421.9	400	105.48	0.41	102
500-6592-1	Silver	0.39478	100	1	0.1	394.78	400	98.70	0.40	101
500-6592-1	Zinc	0.39992	100	1	0.1	399.92	400	99.98	0.40	100
500-6621-1	Lead	0.41820	100	1	0.1	418.2	400	104.55	0.42	105
500-6622-1	Chromium	0.39807	100	1	0.1	398.07	400	99.52	0.40	100
500-6622-1	Lead	0.41820	100	1	0.1	418.2	400	104.55	0.42	105
500-6650-1	Chromium	0.40126	100	1	0.1	401.26	400	100.32	0.40	100
500-6650-1	Copper	0.39950	100	1	0.1	399.5	400	99.88	0.40	100
500-6650-1	Lead	0.42535	100	1	0.1	425.35	400	106.34	0.43	106
500-6651-1	Lead	0.42535	100	1	0.1	425.35	400	106.34	0.43	106
500-6687-1	Lead	0.41087	100	1	0.1	410.87	400	102.72	0.41	103
500-6713-1	Arsenic	0.39850	100	1	0.1	398.5	400	99.63	0.40	100
500-6713-1	Barium	0.39778	100	1	0.1	397.78	400	99.45	0.40	99
500-6713-1	Cadmium	0.39724	100	1	0.1	397.24	400	99.31	0.40	99
500-6713-1	Chromium	0.39779	100	1	0.1	397.79	400	99.45	0.40	99
500-6713-1	Lead	0.40267	100	1	0.1	402.67	400	100.67	0.40	101
500-6713-1	Selenium	0.40557	100	1	0.1	405.57	400	101.39	0.41	101
500-6713-1	Silver	0.39185	100	1	0.1	391.85	400	97.96	0.39	98
500-6714-1	Copper	0.40127	100	1	0.1	401.27	400	100.32	0.40	100
500-6714-1	Lead	0.42324	100	1	0.1	423.24	400	105.81	0.42	106
500-6714-1	Zinc	0.39905	100	1	0.1	399.05	400	99.76	0.40	100
500-6743-1	Copper	0.40425	100	1	0.1	404.25	400	101.06	0.40	101
500-6812-1	Arsenic	0.39244	100	1	0.1	392.44	400	98.11	0.39	98
500-6812-1	Barium	0.38810	100	1	0.1	388.1	400	97.03	0.39	97
500-6812-1	Copper	0.39989	100	1	0.1	399.89	400	99.97	0.40	100
500-6812-1	Lead	0.41662	100	1	0.1	416.62	400	104.16	0.42	104
500-6812-1	Zinc	0.39641	100	1	0.1	396.41	400	99.10	0.40	99
500-6900-1	Lead	0.40378	100	1	0.1	403.78	400	100.95	0.40	101
500-7026-1	Lead	0.39458	100	1	0.1	394.58	400	98.65	0.39	99

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-7047-1	Arsenic	0.39341	100	1	0.1	393.41	400	98.35	0.39	98
500-7047-1	Barium	0.39268	100	1	0.1	392.68	400	98.17	0.39	98
500-7047-1	Chromium	0.39274	100	1	0.1	392.74	400	98.19	0.39	98
500-7047-1	Copper	0.39765	100	1	0.1	397.65	400	99.41	0.40	99
500-7047-1	Lead	0.39768	100	1	0.1	397.68	400	99.42	0.40	99
500-7047-1	Silver	0.39551	100	1	0.1	395.51	400	98.88	0.40	99
500-7047-1	Zinc	0.38815	100	1	0.1	388.15	400	97.04	0.39	97
500-7145-1	Lead	0.40554	100	1	0.1	405.54	400	101.39	0.41	101
500-7513-1	Lead	0.41810	100	1	0.1	418.1	400	104.53	0.42	105
500-14347	Antimony	0.40642	100	1	0.1	406.42	400	101.61	0.41	102
500-14347	Arsenic	0.40977	100	1	0.1	409.77	400	102.44	0.41	102
500-14347	Cadmium	0.40509	100	1	0.1	405.09	400	101.27	0.41	101
500-14347	Chromium	0.41063	100	1	0.1	410.63	400	102.66	0.41	103
500-14347	Copper	0.41391	100	1	0.1	413.91	400	103.48	0.41	103
500-14347	Lead	0.40553	100	1	0.1	405.53	400	101.38	0.41	101
500-14347	Zinc	0.40333	100	1	0.1	403.33	400	100.83	0.41	101
500-14347	Thallium	0.40442	100	1	0.1	404.42	400	101.11	0.41	101

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
Groundwater Metals Samples (mg/L)										
248135	Lead	0.39849	100	1	0.1	398.49	400	99.62	398.49	100
248160	Lead	0.39849	100	1	0.1	398.49	400	99.62	398.48	100
248182	Lead	0.39849	100	1	0.1	398.49	400	99.62	398.48	100
248208	Lead	0.40644	100	1	0.1	406.44	400	101.61	406.44	102
248233	Lead	0.41258	100	1	0.1	412.58	400	103.15	412.58	103
248248	Lead	0.40242	100	1	0.1	402.42	400	100.61	402.42	101
248271	Lead	0.40114	100	1	0.1	401.14	400	100.29	401.14	100
248301	Lead	0.40449	100	1	0.1	404.49	400	101.12	404.49	101
248312	Lead	0.41498	100	1	0.1	414.98	400	103.75	414.98	104
248315	Arsenic	0.40189	100	1	0.1	401.89	400	100.47	401.89	100
248357	Lead	0.41146	100	1	0.1	411.46	400	102.87	411.46	103
248423	Lead	0.39882	100	1	0.1	398.82	400	99.71	398.82	100
248454	Lead	0.40568	100	1	0.1	405.68	400	101.42	405.67	101
248537	Lead	0.40840	100	1	0.1	408.4	400	102.10	408.40	102
248926	Lead	0.41487	100	1	0.1	414.87	400	103.72	414.87	104
248927	Lead	0.41004	100	1	0.1	410.04	400	102.51	414.87	104
249025	Lead	0.41253	100	1	0.1	412.53	400	103.13	412.52	103
249072	Lead	0.40998	100	1	0.1	409.98	400	102.50	409.97	102
249106	Lead	0.40570	100	1	0.1	405.7	400	101.43	405.70	101
249117	Lead	0.40676	100	1	0.1	406.76	400	101.69	406.75	102
249117	Lead	0.39230	100	1	0.1	392.3	400	98.08	392.29	98
249144	Lead	0.39230	100	1	0.1	392.3	400	98.08	329.29	98
249145	Lead	0.39230	100	1	0.1	392.3	400	98.08	329.29	98
249220	Lead	0.40546	100	1	0.1	405.46	400	101.37	405.46	101
249221	Lead	0.40546	100	1	0.1	405.46	400	101.37	405.46	101
249477	Lead	0.41582	100	1	0.1	415.82	400	103.96	415.82	104
249239	Lead	0.40504	100	1	0.1	405.04	400	101.26	405.03	101
249240	Lead	0.42195	100	1	0.1	421.95	400	105.49	421.95	105

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
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Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
249276	Lead	0.40941	100	1	0.1	409.41	400	102.35	409.41	102
249398	Lead	0.41181	100	1	0.1	411.81	400	102.95	411.81	103
249439	Lead	0.40691	100	1	0.1	406.91	400	101.73	406.90	102
249487	Lead	0.41582	100	1	0.1	415.82	400	103.96	415.82	104
249510	Lead	0.42227	100	1	0.1	422.27	400	105.57	422.26	106
249511	Lead	0.42227	100	1	0.1	422.27	400	105.57	422.26	106
249544	Lead	0.41829	100	1	0.1	418.29	400	104.57	418.29	105
249563	Lead	0.42062	100	1	0.1	420.62	400	105.16	420.61	105
249576	Lead	0.42062	100	1	0.1	420.62	400	105.16	420.61	105
249602	Lead	0.41970	100	1	0.1	419.7	400	104.93	419.69	105
249603	Lead	0.41970	100	1	0.1	419.7	400	104.93	419.69	105
249616	Lead	0.41365	100	1	0.1	413.65	400	103.41	413.64	103
249623	Lead	0.40196	100	1	0.1	401.96	400	100.49	401.96	100
249634	Lead	0.41818	100	1	0.1	418.18	400	104.55	418.18	105
249645	Lead	0.41217	100	1	0.1	412.17	400	103.04	412.16	103
249674	Lead	0.42313	100	1	0.1	423.13	400	105.78	423.12	106
249743	Lead	0.41320	100	1	0.1	413.2	400	103.30	413.19	103
249754	Lead	0.40408	100	1	0.1	404.08	400	101.02	404.08	101
249776	Lead	0.39786	100	1	0.1	397.86	400	99.47	397.85	99
249777	Lead	0.41158	100	1	0.1	411.58	400	102.90	411.58	103
249777	Lead	0.41504	100	1	0.1	415.04	400	103.76	415.03	104
249895	Lead	0.41882	100	1	0.1	418.82	400	104.71	418.81	103
249895	Lead	0.40303	100	1	0.1	403.03	400	100.76	403.43	101
249945	Lead	0.41794	100	1	0.1	417.94	400	104.49	417.94	104
249973	Lead	0.41530	100	1	0.1	415.3	400	103.83	415.29	104
250023	Lead	0.40829	100	1	0.1	408.29	400	102.07	408.28	102
250056	Lead	0.40601	100	1	0.1	406.01	400	101.50	406.01	102
250104	Lead	0.40549	100	1	0.1	405.49	400	101.37	405.48	101
250183	Lead	0.40603	100	1	0.1	406.03	400	101.51	406.02	102

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250192	Lead	0.41056	100	1	0.1	410.56	400	102.64	410.56	103
250263	Lead	0.39572	100	1	0.1	395.72	400	98.93	395.71	99
250415	Lead	0.40682	100	1	0.1	406.82	400	101.71	406.81	102
250472	Lead	0.42158	100	1	0.1	421.58	400	105.40	421.57	105
250473	Antimony	0.41276	100	1	0.1	412.76	400	103.19	412.76	103
250473	Barium	0.40756	100	1	0.1	407.56	400	101.89	407.55	102
250473	Chromium	0.41527	100	1	0.1	415.27	400	103.82	415.26	104
250473	Lead	0.42158	100	1	0.1	421.58	400	105.40	421.57	105
250473	Zinc	0.41726	100	1	0.1	417.26	400	104.32	417.25	104
250548	Lead	0.42624	100	1	0.1	426.24	400	106.56	426.24	107
250561	Lead	0.42264	100	1	0.1	422.64	400	105.66	422.63	106
250586	Lead	0.41787	100	1	0.1	417.87	400	104.47	417.86	104
500-4598-2	Arsenic	0.39436	100	1	0.1	394.36	400	98.59	0.39	99
500-4598-2	Cadmium	0.39881	100	1	0.1	398.81	400	99.70	0.40	100
500-4598-2	Copper	0.40034	100	1	0.1	400.34	400	100.09	0.40	100
500-4598-2	Lead	0.41982	100	1	0.1	419.82	400	104.96	0.42	105
500-4598-2	Silver	0.39549	100	1	0.1	395.49	400	98.87	0.40	99
500-4598-2	Zinc	0.39712	100	1	0.1	397.12	400	99.28	0.40	99
500-5122-1	Lead	0.40381	100	1	0.1	403.81	400	100.95	0.40	101
500-5286-2	Lead	0.39397	100	1	0.1	393.97	400	98.49	0.39	98
500-5352-1	Lead	0.41469	100	1	0.1	414.69	400	103.67	0.41	104
500-5529-1	Arsenic	0.39514	100	1	0.1	395.14	400	98.79	0.40	99
500-5427-1	Arsenic	0.39289	100	1	0.1	392.89	400	98.22	0.39	98
500-5427-1	Barium	0.39392	100	1	0.1	393.92	400	98.48	0.39	98
500-5427-1	Cadmium	0.39708	100	1	0.1	397.08	400	99.27	0.40	99
500-5427-1	Copper	0.40598	100	1	0.1	405.98	400	101.50	0.41	101
500-5427-1	Lead	0.41327	100	1	0.1	413.27	400	103.32	0.41	103
500-5427-1	Silver	0.38770	100	1	0.1	387.7	400	96.93	0.39	97
500-5427-1	Zinc	0.39295	100	1	0.1	392.95	400	98.24	0.39	98

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
 mg/L - miligram per liter

Table I-2

Metals Initial Calibration Verification Calculation

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 19 of 19)

Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-5658-1	Lead	0.43368	100	1	0.1	433.68	400	108.42	0.43	108
500-5718-1	Lead	0.41692	100	1	0.1	416.92	400	104.23	0.42	104
500-5767-1	Lead	0.40857	100	1	0.1	408.57	400	102.14	0.41	102
500-5974-1	Lead	0.40983	100	1	0.1	409.83	400	102.46	0.41	102
500-6015-1	Lead	0.41498	100	1	0.1	414.98	400	103.75	0.41	104
500-6053-1	Lead	0.43087	100	1	0.1	430.87	400	107.72	0.43	108
500-6091-1	Lead	0.40914	100	1	0.1	409.14	400	102.29	0.41	102
500-6111-1	Lead	0.43021	100	1	0.1	430.21	400	107.55	0.43	108
500-6235-1	Arsenic	0.39290	100	1	0.1	392.9	400	98.23	0.39	98
500-6088-1	Arsenic	0.39066	100	1	0.1	390.66	400	97.67	0.39	98
500-6088-1	Cadmium	0.39357	100	1	0.1	393.57	400	98.39	0.39	98
500-6088-1	Copper	0.39875	100	1	0.1	398.75	400	99.69	0.40	100
500-6088-1	Lead	0.40973	100	1	0.1	409.73	400	102.43	0.41	102
500-6088-1	Silver	0.39245	100	1	0.1	392.45	400	98.11	0.39	98
500-6088-1	Zinc	0.39262	100	1	0.1	392.62	400	98.16	0.39	98
500-6089-1	Arsenic	0.39066	100	1	0.1	390.66	400	97.67	0.39	98
500-6089-1	Barium	0.39012	100	1	0.1	390.12	400	97.53	0.39	98
500-6089-1	Chromium	0.49732	100	1	0.1	497.32	400	124.33	0.40	99
500-6089-1	Copper	0.39875	100	1	0.1	398.75	400	99.69	0.40	100
500-6089-1	Lead	0.40973	100	1	0.1	409.73	400	102.43	0.41	102
500-6089-1	Silver	0.39245	100	1	0.1	392.45	400	98.11	0.39	98
500-6089-1	Zinc	0.39262	100	1	0.1	392.62	400	98.16	0.39	98
500-6750-1	Lead	0.41397	100	1	0.1	413.97	400	103.49	0.41	103
500-7025-1	Lead	0.40714	100	1	0.1	407.14	400	101.79	0.41	102
500-7162-1	Lead	0.40853	100	1	0.1	408.53	400	102.13	0.41	102
500-7607-1	Lead	0.40645	100	1	0.1	406.45	400	101.61	0.41	99

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram per kilogram
 mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 21)

Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
Soil Metals Samples (mg/kg)										
247739	Lead	0.48364	100	1	0.1	483.64	500	96.73	483.64	97
247739	Zinc	0.47875	100	1	0.1	478.75	500	95.75	478.74	96
247748	Arsenic	0.50418	100	1	0.1	504.18	500	100.84	504.81	101
247748	Copper	0.49999	100	1	0.1	499.99	500	100.00	499.99	100
247748	Lead	0.51023	100	1	0.1	510.23	500	102.05	510.23	102
247748	Zinc	0.50646	100	1	0.1	506.46	500	101.29	506.45	101
247836	Lead	0.49990	100	1	0.1	499.9	500	99.98	499.90	100
247884	Antimony	0.50473	100	1	0.1	504.73	500	100.95	504.72	101
247884	Copper	0.51554	100	1	0.1	515.54	500	103.11	515.54	103
247884	Lead	0.51038	100	1	0.1	510.38	25000	2.04	510.38	102
247884	Silver	0.51485	100	1	0.1	514.85	500	102.97	514.85	103
247884	Thallium	0.50971	100	1	0.1	509.71	25000	2.04	509.71	102
247884	Zinc	0.50446	100	1	0.1	504.46	500	100.89	504.46	101
248048	Lead	0.49148	100	1	0.1	491.48	500	98.30	492.24	98
248048	Zinc	0.44687	100	1	0.1	446.87	500	89.37	438.11	89
248301	Lead	0.49375	100	1	0.1	493.75	500	98.75	493.75	99
248307	Copper	0.49031	100	1	0.1	490.31	500	98.06	490.31	98
248926	Lead	0.50925	100	1	0.1	509.25	500	101.85	509.25	102
248927	Lead	0.48795	100	1	0.1	487.95	500	97.59	487.94	98
248927	Lead	0.48360	100	1	0.1	483.6	500	96.72	483.60	97
248981	Lead	0.49698	100	1	0.1	496.98	500	99.40	496.97	99
249025	Antimony	0.47893	100	1	0.1	478.93	500	95.79	478.94	96
249025	Barium	0.47677	100	1	0.1	476.77	500	95.35	476.77	95
249025	Copper	0.48450	100	1	0.1	484.5	500	96.90	484.51	97
249025	Lead	0.48164	100	1	0.1	481.64	500	96.33	481.65	96
249025	Thallium	0.49467	100	1	0.1	494.67	500	98.93	494.67	99
249025	Zinc	0.47166	100	1	0.1	471.66	500	94.33	471.67	94
249049	Lead	0.48846	100	1	0.1	488.46	500	97.69	488.45	98
249049	Lead	0.53287	100	1	0.1	532.87	500	106.57	532.87	107
249049	Lead	0.48280	100	1	0.1	482.8	500	96.56	482.80	97
249049	Lead	0.48745	100	1	0.1	487.45	500	97.49	487.44	97
249049	Lead	0.48962	100	1	0.1	489.62	500	97.92	489.62	98
249072	Lead	0.49141	100	1	0.1	491.41	500	98.28	491.40	98

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
249144	Lead	0.50362	100	1	0.1	503.62	500	100.72	503.61	101
249145	Lead	0.50002	100	1	0.1	500.02	500	100.00	500.01	100
249177	Lead	0.50199	100	1	0.1	501.99	500	100.40	501.99	100
249177	Zinc	0.49320	100	1	0.1	493.2	500	98.64	493.20	99
249220	Lead	0.49227	100	1	0.1	492.27	500	98.45	492.77	98
249221	Lead	0.49227	100	1	0.1	492.27	500	98.45	492.77	98
249240	Lead	0.48706	100	1	0.1	487.06	500	97.41	487.06	97
249398	Lead	0.51272	100	1	0.1	512.72	500	102.54	512.72	103
249398	Arsenic	0.50601	100	1	0.1	506.01	500	101.20	506.00	101
249398	Cadmium	0.49961	100	1	0.1	499.61	500	99.92	499.60	100
249398	Copper	0.51564	100	1	0.1	515.64	500	103.13	515.64	103
249398	Lead	0.47792	100	1	0.1	477.92	500	95.58	477.91	96
249510	Lead	0.50879	100	1	0.1	508.79	500	101.76	508.79	102
249511	Lead	0.50879	100	1	0.1	508.79	500	101.76	508.79	102
249544	Lead	0.51312	100	1	0.1	513.12	500	102.62	513.11	103
249563	Lead	0.50966	100	1	0.1	509.66	500	101.93	509.65	102
249576	Lead	0.52582	100	1	0.1	525.82	500	105.16	525.82	105
249602	Lead	0.51257	100	1	0.1	512.57	500	102.51	512.56	103
249616	Lead	0.51050	100	1	0.1	510.5	500	102.10	510.49	102
249623	Lead	0.51445	100	1	0.1	514.45	500	102.89	514.45	103
249674	Lead	0.50783	100	1	0.1	507.83	500	101.57	507.83	102
249674	Lead	0.50904	100	1	0.1	509.04	500	101.81	509.04	102
249743	Lead	0.50957	100	1	0.1	509.57	500	101.91	509.57	102
249743	Lead	0.51904	100	1	0.1	519.04	500	103.81	519.04	104
249754	Lead	0.49718	100	1	0.1	497.18	500	99.44	497.18	99
249777	Lead	0.49296	100	1	0.1	492.96	500	98.59	492.95	99
249777	Lead	0.49288	100	1	0.1	492.88	500	98.58	492.88	98
249777	Lead	0.49088	100	1	0.1	490.88	500	98.18	490.88	99
249777	Lead	0.51730	100	1	0.1	517.3	500	103.46	517.30	103
249895	Lead	0.51351	100	1	0.1	513.51	500	102.70	513.51	103
249944	Arsenic	0.49997	100	1	0.1	499.97	500	99.99	499.96	100
249944	Cadmium	0.49739	100	1	0.1	497.39	500	99.48	497.39	99
249944	Copper	0.50755	100	1	0.1	507.55	500	101.51	507.54	102
249944	Lead	0.50524	100	1	0.1	505.24	500	101.05	505.24	101

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
249944	Arsenic	0.49398	100	1	0.1	493.98	500	98.80	493.97	99
249944	Cadmium	0.49456	100	1	0.1	494.56	500	98.91	494.56	99
249944	Copper	0.50171	100	1	0.1	501.71	500	100.34	501.71	100
249944	Lead	0.50219	100	1	0.1	502.19	500	100.44	502.18	100
250183	Lead	0.51227	100	1	0.1	512.27	500	102.45	512.27	102
250224	Antimony	0.49086	100	1	0.1	490.86	500	98.17	490.85	98
250224	Arsenic	0.49122	100	1	0.1	491.22	500	98.24	491.22	98
250224	Barium	0.48701	100	1	0.1	487.01	500	97.40	487.00	97
250224	Copper	0.49741	100	1	0.1	497.41	500	99.48	497.40	99
250224	Lead	0.49410	100	1	0.1	494.1	500	98.82	494.10	99
250224	Silver	0.48788	100	1	0.1	487.884	500	97.58	487.83	98
250224	Thallium	0.49934	100	1	0.1	499.34	500	99.87	499.34	100
250224	Zinc	0.47854	100	1	0.1	478.54	500	95.71	478.53	96
250224	Antimony	0.50293	100	1	0.1	502.93	500	100.59	502.93	101
250224	Arsenic	0.50187	100	1	0.1	501.87	500	100.37	501.86	100
250224	Barium	0.49934	100	1	0.1	499.34	500	99.87	499.34	100
250224	Copper	0.50601	100	1	0.1	506.01	500	101.20	506.00	101
250224	Lead	0.50764	100	1	0.1	507.64	500	101.53	507.64	102
250224	Silver	0.49949	100	1	0.1	499.49	500	99.90	499.49	100
250224	Thallium	0.51197	100	1	0.1	511.97	500	102.39	511.96	102
250224	Zinc	0.49277	100	1	0.1	492.77	500	98.55	492.76	99
250263	Arsenic	0.47977	100	1	0.1	479.77	500	95.95	479.77	96
250263	Cadmium	0.47611	100	1	0.1	476.11	500	95.22	476.11	95
250263	Copper	0.48982	100	1	0.1	489.82	500	97.96	489.81	98
250263	Lead	0.48993	100	1	0.1	489.93	500	97.99	479.92	96
250263	Silver	0.48307	100	1	0.1	483.07	500	96.61	483.06	97
250263	Zinc	0.47438	100	1	0.1	474.38	500	94.88	474.38	95
250373	Arsenic	0.50402	100	1	0.1	504.02	500	100.80	504.01	101
250373	Cadmium	0.51134	100	1	0.1	511.34	500	102.27	511.33	102
250373	Copper	0.50160	100	1	0.1	501.6	500	100.32	501.60	100
250373	Lead	0.50036	100	1	0.1	500.36	500	100.07	500.36	100
250373	Silver	0.49524	100	1	0.1	495.24	500	99.05	495.24	99
250373	Zinc	0.49526	100	1	0.1	495.26	500	99.05	495.26	99
250387	Copper	0.47385	100	1	0.1	473.85	500	94.77	473.84	95

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250399	Arsenic	0.49758	100	1	0.1	497.58	500	99.52	497.57	100
250399	Copper	0.50986	100	1	0.1	509.86	500	101.97	509.86	102
250399	Silver	0.50139	100	1	0.1	501.39	500	100.28	501.38	100
250399	Zinc	0.49876	100	1	0.1	498.76	500	99.75	498.75	100
250399	Cadmium	0.49314	100	1	0.1	493.14	500	98.63	493.13	99
250399	Lead	0.50384	100	1	0.1	503.84	500	100.77	503.84	101
250415	Arsenic	0.49810	100	1	0.1	498.1	500	99.62	498.10	100
250415	Cadmium	0.49867	100	1	0.1	498.67	500	99.73	498.67	100
250415	Copper	0.51680	100	1	0.1	516.8	500	103.36	516.79	103
250415	Lead	0.51065	100	1	0.1	510.65	500	102.13	510.64	102
250415	Silver	0.49721	100	1	0.1	497.21	500	99.44	497.20	99
250415	Zinc	0.48975	100	1	0.1	489.75	500	97.95	489.74	98
250415	Arsenic	0.49092	100	1	0.1	490.92	500	98.18	490.91	98
250415	Cadmium	0.49374	100	1	0.1	493.74	500	98.75	493.74	99
250415	Copper	0.51169	100	1	0.1	511.69	500	102.34	511.68	102
250415	Lead	0.50119	100	1	0.1	501.19	500	100.24	501.19	100
250415	Silver	0.49499	100	1	0.1	494.99	500	99.00	494.99	99
250415	Zinc	0.48950	100	1	0.1	489.5	500	97.90	489.50	98
250418	Arsenic	0.49554	100	1	0.1	495.54	500	99.11	495.54	99
250418	Cadmium	0.49351	100	1	0.1	493.51	500	98.70	493.50	99
250418	Copper	0.51208	100	1	0.1	512.08	500	102.42	512.08	102
250418	Lead	0.50081	100	1	0.1	500.81	500	100.16	500.81	100
250418	Silver	0.51412	100	1	0.1	514.12	500	102.82	514.11	103
250418	Zinc	0.45780	100	1	0.1	457.8	500	91.56		
250429	Copper	0.50519	100	1	0.1	505.19	500	101.04	505.19	101
250429	Zinc	0.49803	100	1	0.1	498.03	500	99.61	498.02	100
250429	Copper	0.51779	100	1	0.1	517.79	500	103.56	517.78	104
250429	Zinc	0.49082	100	1	0.1	490.82	500	98.16	490.81	98
250431	Arsenic	0.49093	100	1	0.1	490.93	500	98.19	490.93	98
250431	Cadmium	0.49328	100	1	0.1	493.28	500	98.66	493.27	99
250431	Copper	0.50861	100	1	0.1	508.61	500	101.72	508.60	102
250431	Lead	0.50663	100	1	0.1	506.63	500	101.33	506.63	101
250431	Silver	0.49571	100	1	0.1	495.71	500	99.14	495.70	99
250431	Zinc	0.49099	100	1	0.1	490.99	500	98.20	490.99	98

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250431	Arsenic	0.49012	100	1	0.1	490.12	500	98.02	490.12	98
250431	Cadmium	0.48549	100	1	0.1	485.49	500	97.10	485.48	97
250431	Copper	0.51662	100	1	0.1	516.62	500	103.32	516.61	103
250431	Lead	0.49653	100	1	0.1	496.53	500	99.31	496.53	99
250431	Silver	0.49457	100	1	0.1	494.57	500	98.91	494.57	99
250431	Zinc	0.47623	100	1	0.1	476.23	500	95.25	476.22	95
250051	Chromium	0.49544	100	1	0.1	495.44	500	99.09	495.43	99
250051	Copper	0.50296	100	1	0.1	502.96	500	100.59	502.96	101
250051	Lead	0.50318	100	1	0.1	503.18	500	100.64	503.17	101
250051	Silver	0.49521	100	1	0.1	495.21	500	99.04	495.20	99
250051	Zinc	0.48896	100	1	0.1	488.96	500	97.79	488.96	98
250051	Chromium	0.47307	100	1	0.1	473.07	500	94.61	473.07	95
250051	Copper	0.50879	100	1	0.1	508.79	500	101.76	508.78	102
250051	Lead	0.47055	100	1	0.1	470.55	500	94.11	470.54	94
250051	Silver	0.47874	100	1	0.1	478.74	500	95.75	478.74	96
250051	Zinc	0.45200	100	1	0.1	452	500	90.40	452.00	90
250051	Chromium	0.47883	100	1	0.1	478.83	500	95.77	478.82	96
250051	Copper	0.50084	100	1	0.1	500.84	500	100.17	500.84	100
250051	Lead	0.48115	100	1	0.1	481.15	500	96.23	481.14	96
250051	Silver	0.47269	100	1	0.1	472.69	500	94.54	472.68	95
250051	Zinc	0.45988	100	1	0.1	459.88	500	91.98	459.87	92
250051	Zinc	0.47294	100	1	0.1	472.94	500	94.59	472.93	95
250051	Zinc	0.48693	100	1	0.1	486.93	500	97.39	486.92	97
250104	Lead	0.50051	100	1	0.1	500.51	500	100.10	500.51	100
250164	Lead	0.50168	100	1	0.1	501.68	500	100.34	501.68	100
250165	Antimony	0.49591	100	1	0.1	495.91	500	99.18	495.90	99
250165	Copper	0.49625	100	1	0.1	496.25	500	99.25	496.25	99
250165	Lead	0.50168	100	1	0.1	501.68	500	100.34	501.68	100
250165	Silver	0.49153	100	1	0.1	491.53	500	98.31	491.53	98
250165	Thallium	0.51809	100	1	0.1	518.09	500	103.62	518.08	104
250165	Zinc	0.49536	100	1	0.1	495.36	500	99.07	495.35	99
250165	Lead	0.50311	100	1	0.1	503.11	500	100.62	503.10	101
250443	Arsenic	0.49567	100	1	0.1	495.67	500	99.13	495.67	99
250443	Cadmium	0.50247	100	1	0.1	502.47	500	100.49	5020.46	100

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250443	Copper	0.50773	100	1	0.1	507.73	500	101.55	507.72	102
250443	Lead	0.50749	100	1	0.1	507.49	500	101.50	507.48	101
250443	Silver	0.49904	100	1	0.1	499.04	500	99.81	499.03	100
250443	Zinc	0.49603	100	1	0.1	496.03	500	99.21	496.02	99
250472	Antimony	0.50317	100	1	0.1	503.17	500	100.63	503.16	101
250472	Arsenic	0.50646	100	1	0.1	506.46	500	101.29	506.46	101
250472	Barium	0.49874	100	1	0.1	498.74	500	99.75	498.74	100
250472	Chromium	0.50153	100	1	0.1	501.53	500	100.31	501.53	100
250472	Copper	0.50763	100	1	0.1	507.63	500	101.53	507.63	102
250472	Lead	0.51022	100	1	0.1	510.22	500	102.04	510.22	102
250472	Nickel	0.50566	100	1	0.1	505.66	500	101.13	505.66	101
250472	Zinc	0.49875	100	1	0.1	498.75	500	99.75	498.74	100
250472	Antimony	0.50446	100	1	0.1	504.46	500	100.89	504.45	101
250472	Arsenic	0.50478	100	1	0.1	504.78	500	100.96	504.78	101
250472	Barium	0.50501	100	1	0.1	505.01	500	101.00	505.00	101
250472	Chromium	0.49782	100	1	0.1	497.82	500	99.56	497.82	100
250472	Copper	0.51552	100	1	0.1	515.52	500	103.10	515.52	103
250472	Lead	0.50317	100	1	0.1	503.17	500	100.63	503.16	101
250472	Nickel	0.50106	100	1	0.1	501.06	500	100.21	501.06	100
250472	Zinc	0.48741	100	1	0.1	487.41	500	97.48	487.41	97
250479	Antimony	0.49354	100	1	0.1	493.54	500	98.71	493.53	99
250479	Arsenic	0.49780	100	1	0.1	497.8	500	99.56	497.80	100
250479	Barium	0.48318	100	1	0.1	483.18	500	96.64	483.17	97
250479	Chromium	0.49668	100	1	0.1	496.68	500	99.34	496.68	99
250479	Copper	0.49587	100	1	0.1	495.87	500	99.17	495.86	99
250479	Lead	0.50560	100	1	0.1	505.6	500	101.12	505.60	101
250479	Nickel	0.50228	100	1	0.1	502.28	500	100.46	502.28	100
250479	Zinc	0.50047	100	1	0.1	500.47	500	100.09	500.46	100
250483	Antimony	0.49846	100	1	0.1	498.46	500	99.69	498.46	100
250483	Arsenic	0.49657	100	1	0.1	496.57	500	99.31	496.57	99
250483	Barium	0.49825	100	1	0.1	498.25	500	99.65	498.25	100
250483	Chromium	0.49247	100	1	0.1	492.47	500	98.49	492.47	98
250483	Copper	0.50798	100	1	0.1	507.98	500	101.60	507.97	102
250483	Lead	0.50066	100	1	0.1	500.66	500	100.13	500.65	100

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250483	Nickel	0.49512	100	1	0.1	495.12	500	99.02	495.12	99
250483	Zinc	0.48542	100	1	0.1	485.42	500	97.08	485.42	97
250483	Antimony	0.49455	100	1	0.1	494.55	500	98.91	494.54	99
250483	Arsenic	0.49336	100	1	0.1	493.36	500	98.67	493.35	99
250483	Barium	0.49130	100	1	0.1	491.3	500	98.26	491.30	98
250483	Chromium	0.49179	100	1	0.1	491.79	500	98.36	491.79	98
250483	Copper	0.49974	100	1	0.1	499.74	500	99.95	499.73	100
250483	Lead	0.50068	100	1	0.1	500.68	500	100.14	500.68	100
250483	Nickel	0.49377	100	1	0.1	493.77	500	98.75	493.77	99
250483	Zinc	0.49003	100	1	0.1	490.03	500	98.01	490.02	98
250504	Antimony	0.49756	100	1	0.1	497.56	500	99.51	497.55	100
250504	Arsenic	0.49986	100	1	0.1	499.86	500	99.97	499.86	100
250504	Barium	0.47801	100	1	0.1	478.01	500	95.60	478.00	96
250504	Chromium	0.50629	100	1	0.1	506.29	500	101.26	506.28	101
250504	Copper	0.48503	100	1	0.1	485.03	500	97.01	485.02	97
250504	Lead	0.52149	100	1	0.1	521.49	500	104.30	521.49	104
250504	Nickel	0.51090	100	1	0.1	510.9	500	102.18	510.89	102
250504	Zinc	0.52229	100	1	0.1	522.29	500	104.46	522.29	104
250504	Antimony	0.49303	100	1	0.1	493.03	500	98.61	493.03	99
250504	Arsenic	0.49445	100	1	0.1	494.45	500	98.89	494.45	99
250504	Barium	0.47982	100	1	0.1	479.82	500	95.96	479.82	96
250504	Chromium	0.49943	100	1	0.1	499.43	500	99.89	499.43	100
250504	Copper	0.48769	100	1	0.1	487.69	500	97.54	487.69	98
250504	Lead	0.51008	100	1	0.1	510.08	500	102.02	510.07	102
250504	Nickel	0.50313	100	1	0.1	503.13	500	100.63	503.12	101
250504	Zinc	0.50870	100	1	0.1	508.7	500	101.74	508.70	102
250523	Antimony	0.49756	100	1	0.1	497.56	500	99.51	497.56	100
250523	Arsenic	0.50222	100	1	0.1	502.22	500	100.44	502.21	100
250523	Barium	0.49309	100	1	0.1	493.09	500	98.62	493.09	99
250523	Chromium	0.49227	100	1	0.1	492.27	500	98.45	492.26	98
250523	Copper	0.50790	100	1	0.1	507.9	500	101.58	507.90	102
250523	Lead	0.50183	100	1	0.1	501.83	500	100.37	501.83	100
250523	Nickel	0.49784	100	1	0.1	497.84	500	99.57	497.84	100
250523	Zinc	0.48886	100	1	0.1	488.86	500	97.77	488.86	98

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250523	Antimony	0.49749	100	1	0.1	497.49	500	99.50	497.48	99
250523	Arsenic	0.49859	100	1	0.1	498.59	500	99.72	498.59	100
250523	Barium	0.49522	100	1	0.1	495.22	500	99.04	495.21	99
250523	Chromium	0.48894	100	1	0.1	488.94	500	97.79	488.94	98
250523	Copper	0.51123	100	1	0.1	511.23	500	102.25	511.22	102
250523	Lead	0.49821	100	1	0.1	498.21	500	99.64	498.20	100
250523	Nickel	0.49416	100	1	0.1	494.16	500	98.83	494.15	99
250523	Zinc	0.48138	100	1	0.1	481.38	500	96.28	481.37	96
250534	Antimony	0.49927	100	1	0.1	499.27	500	99.85	499.27	100
250534	Barium	0.48771	100	1	0.1	487.71	500	97.54	487.71	98
250534	Chromium	0.49665	100	1	0.1	496.65	500	99.33	496.65	99
250534	Lead	0.50258	100	1	0.1	502.58	500	100.52	502.58	101
250534	Zinc	0.49980	100	1	0.1	499.8	500	99.96	499.80	100
250534	Antimony	0.49781	100	1	0.1	497.81	500	99.56	497.80	100
250534	Barium	0.49928	100	1	0.1	499.28	500	99.86	499.27	100
250534	Chromium	0.49098	100	1	0.1	490.98	500	98.20	490.98	98
250534	Lead	0.50099	100	1	0.1	500.99	500	100.20	500.98	100
250534	Zinc	0.48372	100	1	0.1	483.72	500	96.74	483.72	97
250536	Antimony	0.49622	100	1	0.1	496.22	500	99.24	496.22	99
250536	Barium	0.48842	100	1	0.1	488.42	500	97.68	488.42	98
250536	Chromium	0.49228	100	1	0.1	492.28	500	98.46	492.27	98
250536	Lead	0.50385	100	1	0.1	503.85	500	100.77	503.85	101
250536	Zinc	0.49175	100	1	0.1	491.75	500	98.35	491.75	98
250536	Antimony	0.49668	100	1	0.1	496.68	500	99.34	496.68	99
250536	Barium	0.48571	100	1	0.1	485.71	500	97.14	485.71	97
250536	Chromium	0.49326	100	1	0.1	493.26	500	98.65	49326.00	99
250536	Lead	0.50109	100	1	0.1	501.09	500	100.22	501.08	100
250536	Zinc	0.49360	100	1	0.1	493.6	500	98.72	493.60	99
250536	Antimony	0.50074	100	1	0.1	500.74	500	100.15	500.73	100
250536	Barium	0.49415	100	1	0.1	494.15	500	98.83	494.15	99
250536	Chromium	0.49679	100	1	0.1	496.79	500	99.36	496.78	99
250536	Lead	0.51005	100	1	0.1	510.05	500	102.01	510.04	102
250536	Zinc	0.49364	100	1	0.1	493.64	500	98.73	493.63	99
250548	Lead	0.48596	100	1	0.1	485.96	500	97.19	485.95	97

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250548	Lead	0.48786	100	1	0.1	487.86	500	97.57	487.85	98
250551	Arsenic	0.49526	100	1	0.1	495.26	500	99.05	495.26	99
250557	Zinc	0.47888	100	1	0.1	478.88	500	95.78	478.88	96
250573	Antimony	0.48666	100	1	0.1	486.66	500	97.33	486.66	97
250573	Barium	0.48839	100	1	0.1	488.39	500	97.68	488.39	98
250573	Chromium	0.49291	100	1	0.1	492.91	500	98.58	492.91	99
250573	Lead	0.49893	100	1	0.1	498.929	500	99.79	498.29	100
250573	Zinc	0.48543	100	1	0.1	485.43	500	97.09	485.43	97
250595	Arsenic	0.49824	100	1	0.1	498.24	500	99.65	498.24	100
250595	Cadmium	0.49902	100	1	0.1	499.02	500	99.80	499.01	100
250595	Copper	0.51522	100	1	0.1	515.22	500	103.04	515.21	103
250595	Lead	0.50336	100	1	0.1	503.36	500	100.67	503.36	101
250595	Silver	0.50616	100	1	0.1	506.16	500	101.23	506.15	101
250595	Zinc	0.48754	100	1	0.1	487.54	500	97.51	487.54	98
250595	Copper	0.51094	100	1	0.1	510.94	500	102.19	510.94	102
250595	Zinc	0.48808	100	1	0.1	488.08	500	97.62	488.08	98
250595	Copper	0.50554	100	1	0.1	505.54	500	101.11	505.53	101
250595	Zinc	0.48664	100	1	0.1	486.64	500	97.33	486.64	97
250597	Arsenic	0.49753	100	1	0.1	497.53	500	99.51	497.52	100
250597	Cadmium	0.49434	100	1	0.1	494.34	500	98.87	494.34	99
250597	Copper	0.50809	100	1	0.1	508.09	500	101.62	508.08	102
250597	Lead	0.49758	100	1	0.1	497.58	500	99.52	497.57	100
250597	Silver	0.49662	100	1	0.1	496.62	500	99.32	496.61	99
250597	Zinc	0.48845	100	1	0.1	488.45	500	97.69	488.45	98
250603	Arsenic	0.51022	100	1	0.1	510.22	500	102.04	510.22	102
250603	Cadmium	0.51457	100	1	0.1	514.57	500	102.91	514.57	103
250603	Copper	0.52662	100	1	0.1	526.62	500	105.32	526.61	105
250603	Lead	0.51215	100	1	0.1	512.15	500	102.43	512.14	102
250603	Silver	0.51544	100	1	0.1	515.44	500	103.09	515.43	103
250603	Zinc	0.50033	100	1	0.1	500.33	500	100.07	500.32	100
250606	Arsenic	0.50662	100	1	0.1	506.62	500	101.32	506.61	101
250606	Cadmium	0.51384	100	1	0.1	513.84	500	102.77	513.84	103
250606	Copper	0.50079	100	1	0.1	500.79	500	100.16	500.79	100
250606	Lead	0.52737	100	1	0.1	527.37	500	105.47	527.37	105

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
250606	Silver	0.50241	100	1	0.1	502.41	500	100.48	502.40	100
250606	Zinc	0.51793	100	1	0.1	517.93	500	103.59	517.93	104
250606	Copper	0.51589	100	1	0.1	515.89	500	103.18	515.88	103
250560	Antimony	0.50580	100	1	0.1	505.8	500	101.16	505.80	101
250560	Barium	0.49368	100	1	0.1	493.68	500	98.74	493.67	99
250560	Chromium	0.50098	100	1	0.1	500.98	500	100.20	500.98	100
250560	Lead	0.50997	100	1	0.1	509.97	500	101.99	509.97	102
250560	Zinc	0.49429	100	1	0.1	494.29	500	98.86	494.29	99
500-4270-2	Arsenic	0.49360	100	1	0.1	493.6	500	98.72	0.49	99
500-4270-2	Cadmium	0.49571	100	1	0.1	495.71	500	99.14	0.50	99
500-4270-2	Copper	0.50385	100	1	0.1	503.85	500	100.77	0.50	101
500-4270-2	Lead	0.49879	100	1	0.1	498.79	500	99.76	0.50	100
500-4270-2	Silver	0.50032	100	1	0.1	500.32	500	100.06	0.50	100
500-4270-2	Zinc	0.48772	100	1	0.1	487.72	500	97.54	0.49	98
500-4270-2	Arsenic	0.48894	100	1	0.1	488.94	500	97.79	0.49	98
500-4270-2	Cadmium	0.49136	100	1	0.1	491.36	500	98.27	0.49	98
500-4270-2	Copper	0.49955	100	1	0.1	499.55	500	99.91	0.50	100
500-4270-2	Lead	0.49661	100	1	0.1	496.61	500	99.32	0.50	99
500-4270-2	Silver	0.49471	100	1	0.1	494.71	500	98.94	0.49	99
500-4270-2	Zinc	0.48360	100	1	0.1	483.6	500	96.72	0.48	97
500-4287-1	Arsenic	0.48739	100	1	0.1	487.39	500	97.48	0.49	97
500-4287-1	Cadmium	0.49588	100	1	0.1	495.88	500	99.18	0.50	99
500-4287-1	Copper	0.49826	100	1	0.1	498.26	500	99.65	0.50	100
500-4287-1	Lead	0.49687	100	1	0.1	496.87	500	99.37	0.50	99
500-4287-1	Silver	0.49776	100	1	0.1	497.76	500	99.55	0.50	100
500-4287-1	Zinc	0.48656	100	1	0.1	486.56	500	97.31	0.49	97
500-4317-4	Arsenic	0.49532	100	1	0.1	495.32	500	99.06	0.50	99
500-4317-4	Cadmium	0.49454	100	1	0.1	494.54	500	98.91	0.49	99
500-4317-4	Copper	0.51121	100	1	0.1	511.21	500	102.24	0.51	102
500-4317-4	Lead	0.49246	100	1	0.1	492.46	500	98.49	0.49	98
500-4317-4	Silver	0.49507	100	1	0.1	495.07	500	99.01	0.50	99
500-4317-4	Zinc	0.48676	100	1	0.1	486.76	500	97.35	0.49	97
500-4317-4	Arsenic	0.49900	100	1	0.1	499	500	99.80	0.50	100
500-4317-4	Cadmium	0.49339	100	1	0.1	493.39	500	98.68	0.49	99

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-4317-4	Copper	0.50862	100	1	0.1	508.62	500	101.72	0.51	102
500-4317-4	Lead	0.49913	100	1	0.1	499.13	500	99.83	0.50	100
500-4317-4	Silver	0.49495	100	1	0.1	494.95	500	98.99	0.49	99
500-4317-4	Zinc	0.48789	100	1	0.1	487.89	500	97.58	0.49	98
500-4362-1	Lead	0.49605	100	1	0.1	496.05	500	99.21	0.50	99
500-4427-1	Arsenic	0.47259	100	1	0.1	472.59	500	94.52	0.47	95
500-4427-1	Cadmium	0.46747	100	1	0.1	467.47	500	93.49	0.47	93
500-4427-1	Copper	0.48835	100	1	0.1	488.35	500	97.67	0.49	98
500-4427-1	Lead	0.47300	100	1	0.1	473	500	94.60	0.47	95
500-4427-1	Silver	0.47262	100	1	0.1	472.62	500	94.52	0.47	95
500-4427-1	Zinc	0.46204	100	1	0.1	462.04	500	92.41	0.46	92
500-4427-1	Arsenic	0.47241	100	1	0.1	472.41	500	94.48	0.47	94
500-4427-1	Cadmium	0.46818	100	1	0.1	468.18	500	93.64	0.47	94
500-4427-1	Copper	0.48382	100	1	0.1	483.82	500	96.76	0.48	97
500-4427-1	Lead	0.47578	100	1	0.1	475.78	500	95.16	0.48	95
500-4427-1	Silver	0.47198	100	1	0.1	471.98	500	94.40	0.47	94
500-4427-1	Zinc	0.46470	100	1	0.1	464.7	500	92.94	0.46	93
500-4447-1	Lead	0.49944	100	1	0.1	499.44	500	99.89	0.50	100
500-4472-4	Copper	0.50432	100	1	0.1	504.32	500	100.86	0.50	101
500-4472-4	Lead	0.49555	100	1	0.1	495.55	500	99.11	0.50	99
500-4472-4	Copper	0.50884	100	1	0.1	508.84	500	101.77	0.51	102
500-4472-4	Lead	0.49615	100	1	0.1	496.15	500	99.23	0.50	99
500-4561-1	Arsenic	0.49557	100	1	0.1	495.57	500	99.11	0.50	99
500-4561-1	Cadmium	0.49951	100	1	0.1	499.51	500	99.90	0.50	100
500-4561-1	Copper	0.50341	100	1	0.1	503.41	500	100.68	0.50	101
500-4561-1	Lead	0.49645	100	1	0.1	496.45	500	99.29	0.50	99
500-4561-1	Silver	0.48246	100	1	0.1	482.46	500	96.49	0.48	96
500-4561-1	Zinc	0.49927	100	1	0.1	499.27	500	99.85	0.50	100
500-4561-1	Zinc	0.48313	100	1	0.1	483.13	500	96.63	0.48	97
500-4599-2	Lead	0.49126	100	1	0.1	491.26	500	98.25	0.49	98
500-4599-2	Lead	0.48751	100	1	0.1	487.51	500	97.50	0.49	98
500-4602-2	Lead	0.49952	100	1	0.1	499.52	500	99.90	0.50	100
500-4602-2	Lead	0.50262	100	1	0.1	502.62	500	100.52	0.50	101
500-4630-1	Arsenic	0.49889	100	1	0.1	498.89	500	99.78	0.50	100

SDG - sample delivery group

%R - percent recovery

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mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 12 of 21)

Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-4630-1	Copper	0.50611	100	1	0.1	506.11	500	101.22	0.51	101
500-4630-1	Lead	0.50251	100	1	0.1	502.51	500	100.50	0.50	101
500-4630-1	Zinc	0.50145	100	1	0.1	501.45	500	100.29	0.50	100
500-4630-1	Cadmium	0.50543	100	1	0.1	505.43	500	101.09	0.51	101
500-4630-1	Silver	0.50066	100	1	0.1	500.66	500	100.13	0.50	100
500-4630-1	Cadmium	0.50986	100	1	0.1	509.86	500	101.97	0.51	102
500-4630-1	Silver	0.5067	100	1	0.1	506.7	500	101.34	0.49	101
500-4661-2	Lead	0.50008	100	1	0.1	500.08	500	100.02	0.50	100
500-4661-2	Lead	0.51179	100	1	0.1	511.79	500	102.36	0.51	102
500-4661-2	Lead	0.48349	100	1	0.1	483.49	500	96.70	0.48	97
500-4662-2	Lead	0.48967	100	1	0.1	489.67	500	97.93	0.49	98
500-4662-2	Lead	0.52541	100	1	0.1	525.41	500	105.08	0.53	105
500-4685-1	Copper	0.51266	100	1	0.1	512.66	500	102.53	0.51	103
500-4685-1	Lead	0.47564	100	1	0.1	475.64	500	95.13	0.48	95
500-4685-1	Zinc	0.50497	100	1	0.1	504.97	500	100.99	0.50	101
500-4685-1	Copper	0.51000	100	1	0.1	510	500	102.00	0.51	102
500-4685-1	Lead	0.47166	100	1	0.1	471.66	500	94.33	0.47	94
500-4792-2	Lead	0.50323	100	1	0.1	503.23	500	100.65	0.50	101
500-4792-2	Lead	0.51285	100	1	0.1	512.85	500	102.57	0.51	103
500-4814-1	Lead	0.51032	100	1	0.1	510.32	500	102.06	0.51	102
500-4870-1	Lead	0.50456	100	1	0.1	504.56	500	100.91	0.50	101
500-4870-1	Lead	0.49550	100	1	0.1	495.5	500	99.10	0.50	99
500-4954-1	Lead	0.50970	100	1	0.1	509.7	500	101.94	0.51	102
500-4954-1	Lead	0.50994	100	1	0.1	509.94	500	101.99	0.51	102
500-5055-1	Antimony	0.49594	100	1	0.1	495.94	500	99.19	0.50	99
500-5122-1	Lead	0.48438	100	1	0.1	484.38	500	96.88	0.48	97
500-5265-1	Arsenic	0.49475	100	1	0.1	494.75	500	98.95	0.50	99
500-5265-1	Copper	0.50417	100	1	0.1	504.17	500	100.83	0.50	101
500-5265-1	Lead	0.49692	100	1	0.1	496.92	500	99.38	0.50	99
500-5265-1	Thallium	0.49604	100	1	0.1	496.04	500	99.21	0.50	99
500-5265-1	Zinc	0.48482	100	1	0.1	484.82	500	96.96	0.48	97
500-5265-1	Arsenic	0.48894	100	1	0.1	488.94	500	97.79	0.49	98
500-5265-1	Copper	0.50176	100	1	0.1	501.76	500	100.35	0.50	100
500-5265-1	Lead	0.48686	100	1	0.1	486.86	500	97.37	0.49	97

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-5265-1	Thallium	0.49126	100	1	0.1	491.26	500	98.25	0.49	98
500-5265-1	Zinc	0.47253	100	1	0.1	472.53	500	94.51	0.47	95
500-5285-1	Lead	0.51557	100	1	0.1	515.57	500	103.11	0.52	103
500-5285-1	Lead	0.50382	100	1	0.1	503.82	500	100.76	0.50	101
500-5285-1	Lead	0.50000	100	1	0.1	500	500	100.00	0.50	100
500-5286-1	Lead	0.49946	100	1	0.1	499.46	500	99.89	0.50	100
500-5286-1	Lead	0.50342	100	1	0.1	503.42	500	100.68	0.50	101
500-5306-1	Lead	0.50079	100	1	0.1	500.79	500	100.16	0.50	100
500-5347-1	Arsenic	0.49407	100	1	0.1	494.07	500	98.81	0.49	99
500-5352-1	Lead	0.49406	100	1	0.1	494.06	500	98.81	0.49	99
500-5499-1	Antimony	0.49251	100	1	0.1	492.51	500	98.50	0.49	99
500-5499-1	Arsenic	0.49291	100	1	0.1	492.91	500	98.58	0.49	99
500-5499-1	Cadmium	0.49694	100	1	0.1	496.94	500	99.39	0.50	99
500-5499-1	Copper	0.50536	100	1	0.1	505.36	500	101.07	0.51	101
500-5499-1	Lead	0.50417	100	1	0.1	504.17	500	100.83	0.49	99
500-5499-1	Silver	0.50524	100	1	0.1	505.24	500	101.05	0.51	101
500-5499-1	Thallium	0.49457	100	1	0.1	494.57	500	98.91	0.49	99
500-5499-1	Zinc	0.47159	100	1	0.1	471.59	500	94.32	0.47	94
500-5501-1	Antimony	0.50776	100	1	0.1	507.76	500	101.55	0.51	102
500-5501-1	Arsenic	0.50467	100	1	0.1	504.67	500	100.93	0.50	101
500-5501-1	Cadmium	0.49774	100	1	0.1	497.74	500	99.55	0.50	100
500-5501-1	Copper	0.51191	100	1	0.1	511.91	500	102.38	0.51	102
500-5501-1	Lead	0.50876	100	1	0.1	508.76	500	101.75	0.51	102
500-5501-1	Silver	0.50293	100	1	0.1	502.93	500	100.59	0.50	101
500-5501-1	Thallium	0.51907	100	1	0.1	519.07	500	103.81	0.52	104
500-5501-1	Zinc	0.50011	100	1	0.1	500.11	500	100.02	0.50	100
500-5658-1	Lead	0.49268	100	1	0.1	492.68	500	98.54	0.49	99
500-5681-1	Arsenic	0.50561	100	1	0.1	505.61	500	101.12	0.51	101
500-5681-1	Barium	0.51266	100	1	0.1	512.66	500	102.53	0.51	103
500-5681-1	Chromium	0.49961	100	1	0.1	499.61	500	99.92	0.50	100
500-5681-1	Copper	0.49625	100	1	0.1	496.25	500	99.25	0.50	99
500-5681-1	Lead	0.51423	100	1	0.1	514.23	500	102.85	0.51	103
500-5681-1	Silver	0.49692	100	1	0.1	496.92	500	99.38	0.50	99
500-5681-1	Zinc	0.50960	100	1	0.1	509.6	500	101.92	0.51	102

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 14 of 21)

Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-5719-1	Arsenic	0.49344	100	1	0.1	493.44	500	98.69	0.49	99
500-5719-1	Barium	0.48920	100	1	0.1	489.2	500	97.84	0.49	98
500-5719-1	Chromium	0.49666	100	1	0.1	496.66	500	99.33	0.50	99
500-5719-1	Copper	0.50570	100	1	0.1	505.7	500	101.14	0.51	101
500-5719-1	Lead	0.50209	100	1	0.1	502.09	500	100.42	0.50	100
500-5719-1	Silver	0.49052	100	1	0.1	490.52	500	98.10	0.49	98
500-5719-1	Zinc	0.49592	100	1	0.1	495.92	500	99.18	0.50	99
500-5720-1	Lead	0.50209	100	1	0.1	502.09	500	100.42	0.50	100
500-5767-1	Lead	0.50153	100	1	0.1	501.53	500	100.31	0.50	100
500-5933-1	Arsenic	0.50014	100	1	0.1	500.14	500	100.03	0.50	100
500-5933-1	Copper	0.50370	100	1	0.1	503.7	500	100.74	0.50	101
500-5933-1	Lead	0.50675	100	1	0.1	506.75	500	101.35	0.51	101
500-5933-1	Thallium	0.51410	100	1	0.1	514.1	500	102.82	0.51	103
500-5933-1	Zinc	0.50789	100	1	0.1	507.89	500	101.58	0.51	102
500-5954-1	Lead	0.51343	100	1	0.1	513.43	500	102.69	0.51	103
500-5975-1	Lead	0.50003	100	1	0.1	500.03	500	100.01	0.50	100
500-6015-1	Lead	0.50764	100	1	0.1	507.64	500	101.53	0.51	102
500-6017-1	Lead	0.50764	100	1	0.1	507.64	500	101.53	0.51	102
500-6018-1	Arsenic	0.50655	100	1	0.1	506.55	500	101.31	0.51	101
500-6078-1	Arsenic	0.48755	100	1	0.1	487.55	500	97.51	0.49	98
500-6079-1	Copper	0.50348	100	1	0.1	503.48	500	100.70	0.50	101
500-6079-1	Lead	0.48974	100	1	0.1	489.74	500	97.95	0.49	98
500-6079-1	Silver	0.47885	100	1	0.1	478.85	500	95.77	0.48	96
500-6079-1	Zinc	0.47525	100	1	0.1	475.25	500	95.05	0.48	95
500-6111-1	Lead	0.49842	100	1	0.1	498.42	500	99.68	0.50	100
500-6133-1	Copper	0.50518	100	1	0.1	505.18	500	101.04	0.51	101
500-6133-1	Zinc	0.49484	100	1	0.1	494.84	500	98.97	0.49	99
500-6237-1	Arsenic	0.50185	100	1	0.1	501.85	500	100.37	0.50	100
500-6262-1	Copper	0.51454	100	1	0.1	514.54	500	102.91	0.51	103
500-6262-1	Zinc	0.49088	100	1	0.1	490.88	500	98.18	0.49	98
500-6238-1	Arsenic	0.50594	100	1	0.1	505.94	500	101.19	0.51	101
500-6238-1	Copper	0.52458	100	1	0.1	524.58	500	104.92	0.52	105
500-6238-1	Lead	0.51694	100	1	0.1	516.94	500	103.39	0.52	103
500-6238-1	Silver	0.49790	100	1	0.1	497.9	500	99.58	0.50	100

SDG - sample delivery group

%R - percent recovery

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mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 15 of 21)

Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-6238-1	Zinc	0.50807	100	1	0.1	508.07	500	101.61	0.51	102
500-6592-1	Arsenic	0.49810	100	1	0.1	498.1	500	99.62	0.50	100
500-6592-1	Barium	0.49052	100	1	0.1	490.52	500	98.10	0.49	98
500-6592-1	Chromium	0.49770	100	1	0.1	497.7	500	99.54	0.50	100
500-6592-1	Copper	0.50331	100	1	0.1	503.31	500	100.66	0.50	101
500-6592-1	Lead	0.50260	100	1	0.1	502.6	500	100.52	0.50	101
500-6592-1	Silver	0.49137	100	1	0.1	491.37	500	98.27	0.49	98
500-6592-1	Zinc	0.49635	100	1	0.1	496.35	500	99.27	0.50	99
500-6112-1	Antimony	0.49751	100	1	0.1	497.51	500	99.50	0.50	101
500-6112-1	Arsenic	0.49805	100	1	0.1	498.05	500	99.61	0.50	100
500-6112-1	Cadmium	0.49918	100	1	0.1	499.18	500	99.84	0.50	100
500-6112-1	Copper	0.50252	100	1	0.1	502.52	500	100.50	0.50	101
500-6112-1	Lead	0.50306	100	1	0.1	503.06	500	100.61	0.50	100
500-6112-1	Silver	0.49622	100	1	0.1	496.22	500	99.24	0.50	99
500-6112-1	Thallium	0.49771	100	1	0.1	497.71	500	99.54	0.50	100
500-6112-1	Zinc	0.49681	100	1	0.1	496.81	500	99.36	0.50	99
500-6332-1	Antimony	0.48601	100	1	0.1	486.01	500	97.20	0.49	97
500-6332-1	Arsenic	0.48209	100	1	0.1	482.09	500	96.42	0.48	96
500-6332-1	Cadmium	0.47733	100	1	0.1	477.33	500	95.47	0.48	95
500-6332-1	Copper	0.49436	100	1	0.1	494.36	500	98.87	0.49	99
500-6332-1	Lead	0.48289	100	1	0.1	482.89	500	96.58	0.48	97
500-6332-1	Silver	0.48387	100	1	0.1	483.87	500	96.77	0.48	97
500-6332-1	Thallium	0.47487	100	1	0.1	474.87	500	94.97	0.47	95
500-6332-1	Zinc	0.48022	100	1	0.1	480.22	500	96.04	0.48	96
500-6332-1	Arsenic	0.47849	100	1	0.1	478.49	500	95.70	0.48	96
500-6412-1	Lead	0.49291	100	1	0.1	492.91	500	98.58	0.49	99
500-6444-1	Arsenic	0.49368	100	1	0.1	493.68	500	98.74	0.49	99
500-6444-1	Copper	0.49582	100	1	0.1	495.82	500	99.16	0.50	99
500-6444-1	Lead	0.49793	100	1	0.1	497.93	500	99.59	0.50	100
500-6444-1	Zinc	0.49418	100	1	0.1	494.18	500	98.84	0.49	99
500-6467-1	Arsenic	0.49410	100	1	0.1	494.1	500	98.82	0.50	99
500-6467-1	Copper	0.50635	100	1	0.1	506.35	500	101.27	0.50	101
500-6467-1	Lead	0.49975	100	1	0.1	499.75	500	99.95	0.50	100
500-6467-1	Zinc	0.49329	100	1	0.1	493.29	500	98.66	0.50	99

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-6503-1	Lead	0.48111	100	1	0.1	481.11	500	96.22	0.48	96
500-6506-1	Copper	0.49723	100	1	0.1	497.23	500	99.45	0.50	99
500-6506-1	Lead	0.48111	100	1	0.1	481.11	500	96.22	0.48	96
500-6506-1	Silver	0.48427	100	1	0.1	484.27	500	96.85	0.48	97
500-6506-1	Zinc	0.47325	100	1	0.1	473.25	500	94.65	0.47	95
500-6513-1	Copper	0.48961	100	1	0.1	489.61	500	97.92	0.49	98
500-6550-1	Arsenic	0.48331	100	1	0.1	483.31	500	96.66	0.48	97
500-6621-1	Lead	0.49933	100	1	0.1	499.33	500	99.87	0.50	100
500-6622-1	Chromium	0.50748	100	1	0.1	507.48	500	101.50	0.51	101
500-6622-1	Lead	0.49933	100	1	0.1	499.33	500	99.87	0.50	100
500-6650-1	Chromium	0.49894	100	1	0.1	498.94	500	99.79	0.50	100
500-6650-1	Copper	0.49849	100	1	0.1	498.49	500	99.70	0.50	100
500-6650-1	Lead	0.49071	100	1	0.1	490.71	500	98.14	0.49	98
500-6651-1	Lead	0.49224	100	1	0.1	492.24	500	98.45	0.49	98
500-6687-1	Lead	0.4811	100	1	0.1	481.1	500	96.22	0.48	96
500-6713-1	Arsenic	0.49574	100	1	0.1	495.74	500	99.15	0.50	99
500-6713-1	Barium	0.5012	100	1	0.1	501.2	500	100.24	0.50	100
500-6713-1	Cadmium	0.49733	100	1	0.1	497.33	500	99.47	0.50	99
500-6713-1	Chromium	0.49668	100	1	0.1	496.68	500	99.34	0.50	99
500-6713-1	Lead	0.49117	100	1	0.1	491.17	500	98.23	0.49	98
500-6713-1	Selenium	0.47779	100	1	0.1	477.79	500	95.56	0.48	96
500-6713-1	Silver	0.50578	100	1	0.1	505.78	500	101.16	0.51	101
500-6714-1	Copper	0.50056	100	1	0.1	500.56	500	100.11	0.50	100
500-6714-1	Lead	0.50474	100	1	0.1	504.74	500	100.95	0.50	101
500-6714-1	Zinc	0.50265	100	1	0.1	502.65	500	100.53	0.50	101
500-6743-1	Copper	0.50768	100	1	0.1	507.68	500	101.54	0.51	102
500-6812-1	Arsenic	0.49883	100	1	0.1	498.83	500	99.77	0.50	100
500-6812-1	Barium	0.48988	100	1	0.1	489.88	500	97.98	0.49	98
500-6812-1	Copper	0.50286	100	1	0.1	502.86	500	100.57	0.50	101
500-6812-1	Lead	0.50686	100	1	0.1	506.86	500	101.37	0.51	101
500-6812-1	Zinc	0.49795	100	1	0.1	497.95	500	99.59	0.50	100
500-6900-1	Lead	0.50609	100	1	0.1	506.09	500	101.22	0.51	101
500-7026-1	Lead	0.47826	100	1	0.1	478.26	500	95.65	0.48	96
500-7047-1	Arsenic	0.49641	100	1	0.1	496.41	500	99.28	0.50	99

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-7047-1	Barium	0.49520	100	1	0.1	495.2	500	99.04	0.50	99
500-7047-1	Chromium	0.49219	100	1	0.1	492.19	500	98.44	0.49	98
500-7047-1	Copper	0.50257	100	1	0.1	502.57	500	100.51	0.50	101
500-7047-1	Lead	0.49016	100	1	0.1	490.16	500	98.03	0.49	98
500-7047-1	Silver	0.50012	100	1	0.1	500.12	500	100.02	0.50	100
500-7047-1	Zinc	0.48562	100	1	0.1	485.62	500	97.12	0.49	97
500-7145-1	Lead	0.49940	100	1	0.1	499.4	500	99.88	0.50	100
500-7513-1	Lead	0.50057	100	1	0.1	500.57	500	100.11	0.50	100
500-14347	Antimony	0.50687	100	1	0.1	506.87	500	101.37	0.51	100
500-14347	Arsenic	0.50305	100	1	0.1	503.05	500	100.61	0.50	101
500-14347	Cadmium	0.50488	100	1	0.1	504.88	500	100.98	0.50	101
500-14347	Chromium	0.509	100	1	0.1	509	500	101.80	0.50	101
500-14347	Copper	0.5058	100	1	0.1	505.8	500	101.16	0.51	101
500-14347	Lead	0.50001	100	1	0.1	500.01	500	100.00	0.50	100
500-14347	Zinc	0.50914	100	1	0.1	509.14	500	101.83	0.50	102
500-14347	Thallium	0.521	100	1	0.1	521	500	104.20	0.52	104
Groundwater Metals Samples (mg/L)										
248135	Lead	0.50156	100	1	0.1	501.56	500	100.31	501.56	100
248160	Lead	0.50285	100	1	0.1	502.85	500	100.57	502.85	101
248182	Lead	0.48869	100	1	0.1	488.69	500	97.74	488.69	98
248208	Lead	0.50594	100	1	0.1	505.94	500	101.19	505.94	101
248233	Lead	0.50892	100	1	0.1	508.92	500	101.78	508.92	102
248233	Lead	0.51829	100	1	0.1	518.29	500	103.66	518.29	104
248248	Lead	0.48335	100	1	0.1	483.35	500	96.67	484.74	97
248248	Lead	0.48474	100	1	0.1	484.74	500	96.95	487.70	97
248271	Lead	0.50330	100	1	0.1	503.3	500	100.66	503.30	101
248301	Lead	0.49324	100	1	0.1	493.24	500	98.65	493.24	99
248312	Lead	0.50027	100	1	0.1	500.27	500	100.05	500.26	100
248315	Arsenic	0.50233	100	1	0.1	502.33	500	100.47	502.33	100
248357	Lead	0.50867	100	1	0.1	508.67	500	101.73	508.67	102
248423	Lead	0.48367	100	1	0.1	483.67	500	96.73	483.67	97
248454	Lead	0.48903	100	1	0.1	489.03	500	97.81	489.02	98
248537	Lead	0.51922	100	1	0.1	519.22	500	103.84	519.22	104
248537	Lead	0.51196	100	1	0.1	511.96	500	102.39	511.96	102

SDG - sample delivery group
 %R - percent recovery
 ICP - inductively coupled plasma
 mg/kg - miligram pre kilogram
 mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
248926	Lead	0.49596	100	1	0.1	495.96	500	99.19	495.96	99
248927	Lead	0.49596	100	1	0.1	495.96	500	99.19	495.96	99
248927	Lead	0.49207	100	1	0.1	492.07	500	98.41	492.06	98
249025	Lead	0.50763	100	1	0.1	507.63	500	101.53	507.63	102
249072	Lead	0.50674	100	1	0.1	506.74	500	101.35	506.74	101
249106	Lead	0.48875	100	1	0.1	488.75	500	97.75	488.74	98
249117	Lead	0.49414	100	1	0.1	494.14	500	98.83	494.14	99
249117	Lead	0.46458	100	1	0.1	464.58	500	92.92	464.58	93
249144	Lead	0.49049	100	1	0.1	490.49	500	98.10	490.49	98
249144	Lead	0.47805	100	1	0.1	478.05	500	95.61	478.04	96
249145	Lead	0.47805	100	1	0.1	478.05	500	95.61	478.04	96
249220	Lead	0.49702	100	1	0.1	497.02	500	99.40	497.01	99
249220	Lead	0.49460	100	1	0.1	494.6	500	98.92	494.60	99
249221	Lead	0.49702	100	1	0.1	497.02	500	99.40	497.01	99
249477	Lead	0.50113	100	1	0.1	501.13	500	100.23	501.13	100
249239	Lead	0.49083	100	1	0.1	490.83	500	98.17	490.83	98
249240	Lead	0.49723	100	1	0.1	497.23	500	99.45	497.23	99
249276	Lead	0.50313	100	1	0.1	503.13	500	100.63	503.12	101
249398	Lead	0.49804	100	1	0.1	498.04	500	99.61	498.04	100
249439	Lead	0.50732	100	1	0.1	507.32	500	101.46	507.31	101
249487	Lead	0.50113	100	1	0.1	501.13	500	100.23	501.13	100
249510	Lead	0.50428	100	1	0.1	504.28	500	100.86	504.28	101
249511	Lead	0.50467	100	1	0.1	504.67	500	100.93	504.67	101
249544	Lead	0.49831	100	1	0.1	498.31	500	99.66	498.30	100
249563	Lead	0.51159	100	1	0.1	511.59	500	102.32	511.59	102
249576	Lead	0.50728	100	1	0.1	507.28	500	101.46	507.27	101
249602	Lead	0.51613	100	1	0.1	516.13	500	103.23	516.13	103
249603	Lead	0.52055	100	1	0.1	520.55	500	104.11	520.55	104
249616	Lead	0.50354	100	1	0.1	503.54	500	100.71	503.54	101
249623	Lead	0.48525	100	1	0.1	485.25	500	97.05	485.25	97
249634	Lead	0.49075	100	1	0.1	490.75	500	98.15	490.74	98
249645	Lead	0.50933	100	1	0.1	509.33	500	101.87	509.32	102
249674	Lead	0.50716	100	1	0.1	507.16	500	101.43	507.16	101
249674	Lead	0.49954	100	1	0.1	499.54	500	99.91	499.54	100

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
249743	Lead	0.50284	100	1	0.1	502.84	500	100.57	502.84	101
249743	Lead	0.50719	100	1	0.1	507.19	500	101.44	507.19	101
249754	Lead	0.48572	100	1	0.1	485.72	500	97.14	485.71	97
249776	Lead	0.49543	100	1	0.1	495.43	500	99.09	495.42	99
249777	Lead	0.50495	100	1	0.1	504.95	500	100.99	504.95	101
249777	Lead	0.50635	100	1	0.1	506.35	500	101.27	506.35	101
249777	Lead	0.49669	100	1	0.1	496.69	500	99.34	496.69	99
249895	Lead	0.51014	100	1	0.1	510.14	500	102.03	510.13	102
249895	Lead	0.49233	100	1	0.1	492.33	500	98.47	493.32	98
249945	Lead	0.49338	100	1	0.1	493.38	500	98.68	493.38	99
249973	Lead	0.49396	100	1	0.1	493.96	500	98.79	493.95	99
250023	Lead	0.49292	100	1	0.1	492.92	500	98.58	492.91	99
250056	Lead	0.495	100	1	0.1	495	500	99.00	495.00	99
250183	Lead	0.52122	100	1	0.1	521.22	500	104.24	521.21	104
250192	Lead	0.50348	100	1	0.1	503.48	500	100.70	503.47	101
250263	Lead	0.48972	100	1	0.1	489.72	500	97.94	489.72	98
250415	Lead	0.51338	100	1	0.1	513.38	500	102.68	513.37	103
250472	Lead	0.51022	100	1	0.1	510.22	500	102.04	510.22	102
250472	Lead	0.50317	100	1	0.1	503.17	500	100.63	503.16	101
250473	Antimony	0.50667	100	1	0.1	506.67	500	101.33	506.67	101
250473	Barium	0.50244	100	1	0.1	502.44	500	100.49	502.43	100
250473	Chromium	0.50356	100	1	0.1	503.56	500	100.71	503.55	101
250473	Lead	0.51414	100	1	0.1	514.14	500	102.83	514.14	103
250473	Zinc	0.49801	100	1	0.1	498.01	500	99.60	498.01	100
250541	Lead	0.50482	100	1	0.1	504.82	500	100.96	504.81	101
250548	Lead	0.50449	100	1	0.1	504.49	500	100.90	504.48	101
250561	Lead	0.50807	100	1	0.1	508.07	500	101.61	508.06	102
250586	Lead	0.51287	100	1	0.1	512.87	500	102.57	512.87	103
500-4598-2	Arsenic	0.48952	100	1	0.1	489.52	500	97.90	0.49	98
500-4598-2	Cadmium	0.48948	100	1	0.1	489.48	500	97.90	0.49	98
500-4598-2	Copper	0.49971	100	1	0.1	499.71	500	99.94	0.50	100
500-4598-2	Lead	0.494	100	1	0.1	494	500	98.80	0.49	99
500-4598-2	Silver	0.48889	100	1	0.1	488.89	500	97.78	0.49	98
500-4598-2	Zinc	0.48156	100	1	0.1	481.56	500	96.31	0.48	96

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-5122-1	Lead	0.49218	100	1	0.1	492.18	500	98.44	0.49	98
500-5286-2	Lead	0.48534	100	1	0.1	485.34	500	97.07	0.49	97
500-5286-2	Lead	0.49194	100	1	0.1	491.94	500	98.39	0.49	98
500-5529-1	Arsenic	0.48561	100	1	0.1	485.61	500	97.12	0.49	97
500-5427-1	Arsenic	0.48611	100	1	0.1	486.11	500	97.22	0.49	97
500-5427-1	Barium	0.48362	100	1	0.1	483.62	500	96.72	0.48	97
500-5427-1	Cadmium	0.49243	100	1	0.1	492.43	500	98.49	0.49	98
500-5427-1	Copper	0.50294	100	1	0.1	502.94	500	100.59	0.50	101
500-5427-1	Lead	0.49842	100	1	0.1	498.42	500	99.68	0.50	100
500-5427-1	Silver	0.48503	100	1	0.1	485.03	500	97.01	0.49	97
500-5427-1	Zinc	0.49378	100	1	0.1	493.78	500	98.76	0.49	99
500-5658-1	Lead	0.52186	100	1	0.1	521.86	500	104.37	0.52	104
500-5718-1	Lead	0.48371	100	1	0.1	483.71	500	96.74	0.48	97
500-5767-1	Lead	0.51443	100	1	0.1	514.43	500	102.89	0.51	103
500-5974-1	Lead	0.51036	100	1	0.1	510.36	500	102.07	0.51	102
500-6015-1	Lead	0.50804	100	1	0.1	508.04	500	101.61	0.51	102
500-6053-1	Lead	0.50122	100	1	0.1	501.22	500	100.24	0.50	100
500-6091-1	Lead	0.50103	100	1	0.1	501.03	500	100.21	0.50	100
500-6111-1	Lead	0.49349	100	1	0.1	493.49	500	98.70	0.49	99
500-6235-1	Arsenic	0.50045	100	1	0.1	500.45	500	100.09	0.50	100
500-6088-1	Arsenic	0.4973	100	1	0.1	497.3	500	99.46	0.50	99
500-6088-1	Cadmium	0.49706	100	1	0.1	497.06	500	99.41	0.50	99
500-6088-1	Copper	0.50753	100	1	0.1	507.53	500	101.51	0.51	102
500-6088-1	Lead	0.49725	100	1	0.1	497.25	500	99.45	0.50	99
500-6088-1	Silver	0.50057	100	1	0.1	500.57	500	100.11	0.50	100
500-6088-1	Zinc	0.48491	100	1	0.1	484.91	500	96.98	0.48	97
500-6089-1	Arsenic	0.4973	100	1	0.1	497.3	500	99.46	0.50	99
500-6089-1	Barium	0.49818	100	1	0.1	498.18	500	99.64	0.50	100
500-6089-1	Chromium	0.49732	100	1	0.1	497.32	500	99.46	0.50	99
500-6089-1	Copper	0.50753	100	1	0.1	507.53	500	101.51	0.51	102
500-6089-1	Lead	0.49725	100	1	0.1	497.25	500	99.45	0.50	99
500-6089-1	Silver	0.50057	100	1	0.1	500.57	500	100.11	0.50	100
500-6089-1	Zinc	0.48491	100	1	0.1	484.91	500	96.98	0.48	97
500-6750-1	Lead	0.49194	100	1	0.1	491.94	500	98.39	0.49	98

SDG - sample delivery group

%R - percent recovery

ICP - inductively coupled plasma

mg/kg - miligram pre kilogram

mg/L - miligram per liter

Table I-3

Metals Continuing Calibration Verification Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 21 of 21)

Laboratory: Severn Trent

ICP mg/L = A * B* C/D

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Sample Amount (g or mL)

SDG	Analyte	ICP reading	Final Volume (mls)	Dilution Factor	Sample Volume (mls)	Recalculated Results	Known Concentration	Recalculated %R	Reported Results	Reported %R
500-7025-1	Lead	0.48559	100	1	0.1	485.59	500	97.12	0.49	97
500-7162-1	Lead	0.50215	100	1	0.1	502.15	500	100.43	0.50	100
500-7607-1	Lead	0.48611	100	1	0.1	486.11	500	97.22	0.49	97

SDG - sample delivery group
%R - percent recovery
ICP - inductively coupled plasma
mg/kg - miligram pre kilogram
mg/L - miligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Soil Metals Samples (mg/kg)						
Lead	247739	180	0	180.86	100.5	100
Zinc	247739	900	0	898.88	99.9	100
Arsenic	247748	10	0	9.38	93.8	94
Copper	247748	25	0	25.01	100.0	100
Lead	247748	10	0	10.24	102.4	102
Zinc	247748	50	0	49.45	98.9	99
Lead	247836	10	0	9.62	96.2	96
Antimony	247884	50	0	46.80	93.6	94
Copper	247884	25	0	25.15	100.6	101
Lead	247884	10	0	10.10	101.0	101
Silver	247884	5	0	4.80	96.0	96
Thallium	247884	10	0	9.06	90.6	91
Zinc	247884	50	0	48.82	97.6	98
Lead	248048	10	0	10.27	102.7	103
Zinc	248048	50	0	46.41	92.8	93
Lead	248301	10	0	9.78	97.8	98
Copper	248307	25	0	23.55	94.2	94
Lead	248926	10	0	9.54	95.4	95
Lead	248927	10	0	9.31	93.1	93
Lead	248981	10	0	9.63	96.3	96
Antimony	249025	50	0	45.21	90.4	90
Barium	249025	200	0	187.43	93.7	94
Lead	249025	10	0	9.31	93.1	93
Copper	249025	25	0	24.31	97.2	97
Thallium	249025	10	0	9.16	91.6	92
Zinc	249025	50	0	45.66	91.3	91

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Lead	249049	10	0	9.66	96.6	97
Lead	249049	10	0	9.38	93.8	94
Lead	249072	10	0	9.48	94.8	95
Lead	249144	10	0	9.60	96.0	96
Lead	249145	10	0	9.60	96.0	96
Lead	249177	10	0	9.58	95.8	96
Zinc	249177	50	0	46.79	93.6	94
Lead	249220	10	0	9.58	95.8	96
Lead	249221	10	0	9.58	95.8	96
Lead	249240	10	0	9.58	95.8	96
Lead	249398	10	0	9.86	98.6	99
Arsenic	249398	10	0	9.15	91.5	92
Cadmium	249398	5	0	4.72	94.4	94
Copper	249398	25	0	24.63	98.5	99
Lead	249398	10	0	9.46	94.6	95
Lead	249439	10	0	9.78	97.8	98
Lead	249510	10	0	9.90	99.0	99
Lead	249511	10	0	9.90	99.0	99
Lead	249544	10	0	9.73	97.3	97
Lead	249563	10	0	9.58	95.8	96
Lead	249576	10	0	9.54	95.4	95
Lead	249602	10	0	10.62	106.2	106
Lead	249616	10	0	9.48	94.8	95
Lead	249623	10	0	10.07	100.7	101
Lead	249674	10	0	9.66	96.6	97
Lead	249743	10	0	10.11	101.1	101
Lead	249754	10	0	9.97	99.7	100

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 3 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Lead	249777	10	0	9.74	97.4	97
Lead	249895	10	0	10.03	100.3	100
Arsenic	249944	10	0	9.04	90.4	90
Cadmium	249944	5	0	4.78	95.6	96
Copper	249944	25	0	24.48	97.9	98
Lead	249944	10	0	10.01	100.1	100
Lead	250183	10	0	9.48	94.8	95
Antimony	250224	50	0	42.37	84.7	85
Arsenic	250224	10	0	9.36	93.6	94
Barium	250224	200	0	183.70	91.9	92
Copper	250224	25	0	24.38	97.5	98
Lead	250224	10	0	9.63	96.3	96
Silver	250224	5	0	4.53	90.6	91
Thallium	250224	10	0	8.88	88.8	89
Zinc	250224	50	0	46.76	93.5	94
Arsenic	250263	10	0	8.75	87.5	88
Cadmium	250263	5	0	4.47	89.4	89
Copper	250263	25	0	24.32	97.3	97
Lead	250263	10	0	9.35	93.5	93
Silver	250263	5	0	4.31	86.2	86
Zinc	250263	50	0	44.49	89.0	89
Arsenic	250373	10	0	9.69	96.9	97
Cadmium	250373	5	0	4.64	92.8	93
Copper	250373	25	0	23.65	94.6	95
Lead	250373	10	0	9.76	97.6	98
Silver	250373	5	0	4.38	87.6	88
Zinc	250373	50	0	46.26	92.5	93

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 4 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Copper	250387	25	0	22.68	90.7	91
Arsenic	250399	10	0	9.65	96.5	96
Copper	250399	25	0	24.05	96.2	96
Silver	250399	5	0	4.45	89.0	89
Zinc	250399	50	0	45.69	91.4	91
Cadmium	250399	5	0	4.61	92.2	92
Lead	250399	10	0	9.49	94.9	95
Arsenic	250415	10	0	9.57	95.7	96
Cadmium	250415	5	0	4.68	93.6	94
Copper	250415	25	0	24.36	97.4	97
Lead	250415	10	0	9.81	98.1	98
Silver	250415	5	0	4.66	93.2	93
Zinc	250415	50	0	47.07	94.1	94
Arsenic	250418	10	0	9.72	97.2	97
Cadmium	250418	5	0	4.67	93.4	93
Copper	250418	25	0	24.38	97.5	98
Lead	250418	10	0	9.79	97.9	98
Silver	250418	5	0	4.62	92.4	92
Zinc	250418	50	0	48.68	97.4	97
Copper	250429	25	0	24.98	99.9	100
Zinc	250429	50	0	48.43	96.9	97
Arsenic	250431	10	0	8.78	87.8	88
Cadmium	250431	5	0	4.57	91.4	91
Copper	250431	25	0	24.17	96.7	97
Lead	250431	10	0	9.75	97.5	97
Silver	250431	5	0	4.43	88.6	89
Zinc	250431	50	0	45.75	91.5	92

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 5 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Chromium	250051	20	0	17.99	90.0	90
Copper	250051	25	0	22.82	91.3	91
Lead	250051	10	0	9.17	91.7	92
Silver	250051	5	0	4.17	83.4	83
Zinc	250051	50	0	43.50	87.0	87
Zinc	250051	50	0	49.00	98.0	98
Copper	250051	25	0	24.65	98.6	99
Lead	250051	10	0	8.88	88.8	89
Silver	250051	5	0	4.32	86.4	86
Lead	250164	10	0	9.89	98.9	99
Antimony	250165	50	0	44.46	88.9	89
Copper	250165	25	0	24.41	97.6	98
Lead	250165	10	0	9.89	98.9	99
Silver	250165	5	0	4.63	92.6	93
Thallium	250165	10	0	9.54	95.4	95
Zinc	250165	50	0	48.20	96.4	96
Lead	250165	10	0	9.90	99.0	99
Arsenic	250443	10	0	10.09	100.9	101
Cadmium	250443	5	0	4.72	94.4	94
Copper	250443	25	0	24.65	98.6	99
Lead	250443	10	0	9.80	98.0	98
Silver	250443	5	0	4.48	89.6	90
Zinc	250443	50	0	48.79	97.6	98
Antimony	250472	50	0	44.79	89.6	90
Arsenic	250472	10	0	9.75	97.5	98
Barium	250472	200	0	190.19	95.1	95
Chromium	250472	20	0	19.46	97.3	97

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 6 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Copper	250472	25	0	24.82	99.3	99
Lead	250472	10	0	10.16	101.6	102
Nickel	250472	50	0	47.80	95.6	96
Zinc	250472	50	0	47.12	94.2	94
Antimony	250479	50	0	44.85	89.7	90
Arsenic	250479	10	0	10.21	102.1	102
Barium	250479	200	0	182.93	91.5	91
Chromium	250479	20	0	19.06	95.3	95
Copper	250479	25	0	24.05	96.2	96
Lead	250479	10	0	9.70	97.0	97
Nickel	250479	50	0	46.89	93.8	94
Zinc	250479	50	0	46.90	93.8	94
Antimony	250483	50	0	44.08	88.2	88
Arsenic	250483	10	0	9.80	98.0	98
Barium	250483	200	0	185.98	93.0	93
Chromium	250483	20	0	18.97	94.9	95
Copper	250483	25	0	24.23	96.9	97
Lead	250483	10	0	9.92	99.2	99
Nickel	250483	50	0	46.76	93.5	94
Zinc	250483	50	0	46.84	93.7	94
Antimony	250504	50	0	45.94	91.9	92
Arsenic	250504	10	0	9.66	96.6	97
Barium	250504	200	0	181.23	90.6	91
Chromium	250504	20	0	19.62	98.1	98
Copper	250504	25	0	23.59	94.4	94
Lead	250504	10	0	10.30	103.0	103
Nickel	250504	50	0	48.34	96.7	97

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 7 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Zinc	250504	50	0	49.81	99.6	100
Antimony	250523	50	0	45.00	90.0	90
Arsenic	250523	10	0	9.17	91.7	92
Barium	250523	200	0	181.04	90.5	91
Chromium	250523	20	0	18.76	93.8	94
Copper	250523	25	0	24.51	98.0	98
Lead	250523	10	0	9.73	97.3	97
Nickel	250523	50	0	46.03	92.1	92
Zinc	250523	50	0	46.87	93.7	94
Antimony	250534	50	0	43.46	86.9	87
Barium	250534	200	0	180.35	90.2	90
Chromium	250534	20	0	18.80	94.0	94
Lead	250534	10	0	9.63	96.3	96
Zinc	250534	50	0	45.90	91.8	92
Antimony	250536	50	0	44.20	88.4	88
Barium	250536	200	0	180.33	90.2	90
Chromium	250536	20	0	18.75	93.8	94
Lead	250536	10	0	9.58	95.8	96
Zinc	250536	50	0	46.28	92.6	93
Lead	250548	10	0	9.40	94.0	94
Arsenic	250551	10	0	9.1	91.0	91
Zinc	250557	50	0	43.33	86.7	87
Antimony	250560	50	0	46.81	93.6	94
Barium	250560	200	0	186.24	93.1	93
Chromium	250560	20	0	19.04	95.2	95
Lead	250560	10	0	9.95	99.5	100
Zinc	250560	50	0	46.33	92.7	93

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 8 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Antimony	250573	50	0	44.68	89.4	89
Barium	250573	200	0	183.84	91.9	92
Chromium	250573	20	0	18.87	94.4	94
Lead	250573	10	0	9.72	97.2	97
Zinc	250573	50	0	46.57	93.1	93
Arsenic	250595	10	0	9.28	92.8	93
Cadmium	250595	5	0	4.58	91.6	92
Copper	250595	25	0	24.54	98.2	98
Lead	250595	10	0	9.71	97.1	97
Silver	250595	5	0	4.68	93.6	94
Zinc	250595	50	0	46.39	92.8	93
Arsenic	250597	10	0	9.43	94.3	94
Cadmium	250597	5	0	4.60	92.0	92
Copper	250597	25	0	24.03	96.1	96
Lead	250597	10	0	9.52	95.2	95
Silver	250597	5	0	4.58	91.6	92
Zinc	250597	50	0	46.01	92.0	92
Arsenic	250603	10	0	8.96	89.6	90
Cadmium	250603	5	0	4.48	89.6	90
Copper	250603	25	0	23.51	94.0	94
Lead	250603	10	0	9.47	94.7	95
Silver	250603	5	0	4.49	89.8	90
Zinc	250603	50	0	45.24	90.5	90
Arsenic	250606	10	0	9.37	93.7	94
Cadmium	250606	5	0	4.59	91.8	92
Copper	250606	25	0	23.10	92.4	92
Lead	250606	10	0	9.66	96.6	97

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Silver	250606	5	0	4.50	90.0	90
Zinc	250606	50	0	46.47	92.9	93
Arsenic	500-4270-2	10	0	9.31	93.1	93
Cadmium	500-4270-2	5	0	4.59	91.8	92
Copper	500-4270-2	25	0	23.4	93.6	93
Lead	500-4270-2	10	0	9.66	96.6	97
Silver	500-4270-2	5	0	4.47	89.4	89
Zinc	500-4270-2	50	0	46.2	92.4	92
Arsenic	500-4287-1	10	0	9.4	93.7	94
Cadmium	500-4287-1	5	0	4.7	93.6	94
Copper	500-4287-1	25	0	23.7	94.8	95
Lead	500-4287-1	10	0	10.0	100.0	100
Silver	500-4287-1	5	0	4.4	88.4	88
Zinc	500-4287-1	50	0	47.8	95.6	96
Arsenic	500-4317-4	10	0	9.21	92.1	92
Cadmium	500-4317-4	5	0	4.65	93.0	93
Copper	500-4317-4	25	0	24.2	96.8	97
Lead	500-4317-4	10	0	9.62	96.2	96
Silver	500-4317-4	5	0	4.53	90.6	91
Zinc	500-4317-4	50	0	46.1	92.2	92
Lead	500-4362-1	10	0	9.83	98.3	98
Arsenic	500-4427-1	10	0	9.13	91.3	91
Cadmium	500-4427-1	5	0	4.5	90.0	90
Copper	500-4427-1	25	0	23.70	94.8	95
Lead	500-4427-1	10	0	9.46	94.6	95
Silver	500-4427-1	5	0	4.58	91.6	92
Zinc	500-4427-1	50	0	45.80	91.6	92

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 10 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Lead	500-4447-1	10	0	9.85	98.5	99
Copper	500-4472-4	25	0	25.00	100.0	100
Lead	500-4472-4	10	0	9.72	97.2	97
Arsenic	500-4561-1	10	0	9.19	91.9	92
Cadmium	500-4561-1	5	0	4.73	94.6	95
Copper	500-4561-1	25	0	24.30	97.2	97
Lead	500-4561-1	10	0	9.61	96.1	96
Silver	500-4561-1	5	0	4.06	81.2	81
Zinc	500-4561-1	50	0	47.90	95.8	96
Lead	500-4599-2	10	0	9.50	95.0	95
Lead	500-4602-2	10	0	9.43	94.3	94
Arsenic	500-4630-1	10	0	9.33	93.3	93
Cadmium	500-4630-1	5	0	4.85	97.0	97
Copper	500-4630-1	25	0	26.50	106.0	106
Lead	500-4630-1	10	0	9.88	98.8	99
Silver	500-4630-1	5	0	4.23	84.6	85
Zinc	500-4630-1	50	0	49.00	98.0	98
Lead	500-4661-2	10	0	9.72	97.2	97
Lead	500-4662-2	10	0	9.12	91.2	91
Copper	500-4685-1	25	0	23.70	94.8	95
Lead	500-4685-1	10	0	8.97	89.7	90
Zinc	500-4685-1	50	0	47.50	95.0	95
Lead	500-4792-2	10	0	9.64	96.4	96
Lead	500-4814-1	10	0	9.77	97.7	98
Lead	500-4870-1	10	0	9.30	93.0	93
Lead	500-4954-1	10	0	9.79	97.9	98
Antimony	500-5055-1	50	0	43.20	86.4	86

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 11 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Lead	500-5122-1	10	0	9.89	98.9	99
Arsenic	500-5265-1	10	0	9.51	95.1	95
Copper	500-5265-1	25	0	24.60	98.4	98
Lead	500-5265-1	10	0	9.57	95.7	96
Thallium	500-5265-1	10	0	9.43	94.3	94
Zinc	500-5265-1	50	0	47.60	95.2	95
Lead	500-5285-1	10	0	9.61	96.1	96
Lead	500-5286-1	10	0	9.57	95.7	96
Lead	500-5306-1	10	0	9.68	96.8	97
Arsenic	500-5347-1	10	0	9.01	90.1	90
Lead	500-5352-1	10	0	9.69	96.9	97
Antimony	500-5499-1	50	0	46.00	92.0	92
Arsenic	500-5499-1	10	0	9.70	97.0	97
Cadmium	500-5499-1	5	0	4.85	97.0	97
Copper	500-5499-1	25	0	24.90	99.6	99
Lead	500-5499-1	10	0	9.75	97.5	98
Silver	500-5499-1	5	0	4.57	91.4	91
Thallium	500-5499-1	10	0	9.59	95.9	96
Zinc	500-5499-1	50	0	46.10	92.2	92
Antimony	500-5501-1	50	0	45.40	90.8	91
Arsenic	500-5501-1	10	0	9.23	92.3	92
Cadmium	500-5501-1	5	0	4.68	93.6	94
Copper	500-5501-1	25	0	23.80	95.2	95
Lead	500-5501-1	10	0	9.48	94.8	95
Silver	500-5501-1	5	0	4.27	85.4	85
Thallium	500-5501-1	10	0	9.61	96.1	96
Zinc	500-5501-1	50	0	47.70	95.4	95

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 12 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Arsenic	500-5681-1	10	0	9.57	95.7	96
Barium	500-5681-1	200	0	192.00	96.0	96
Chromium	500-5681-1	20	0	20.00	100.0	100
Copper	500-5681-1	25	0	24.80	99.2	99
Lead	500-5681-1	10	0	10.60	106.0	106
Silver	500-5681-1	5	0	4.82	96.4	96
Zinc	500-5681-1	50	0	50.80	101.6	102
Lead	500-5658-1	10	0	9.78	97.8	98
Arsenic	500-5719-1	10	0	8.57	85.7	86
Barium	500-5719-1	200	0	191.00	95.5	96
Chromium	500-5719-1	20	0	19.20	96.0	96
Copper	500-5719-1	25	0	24.60	98.4	99
Lead	500-5719-1	10	0	9.60	96.0	96
Silver	500-5719-1	5	0	4.61	92.2	92
Zinc	500-5719-1	50	0	46.30	92.6	93
Lead	500-5720-1	10	0	9.60	96.0	96
Lead	500-5767-1	10	0	9.87	98.7	99
Arsenic	500-5933-1	10	0	9.06	90.6	91
Copper	500-5933-1	25	0	24.70	98.8	99
Lead	500-5933-1	10	0	10.00	100.0	100
Thallium	500-5933-1	10	0	9.64	96.4	96
Zinc	500-5933-1	50	0	49.60	99.2	99
Lead	500-5954-1	10	0	9.97	99.7	100
Lead	500-5975-1	10	0	9.58	95.8	96
Lead	500-6015-1	10	0	9.80	98.0	98
Lead	500-6017-1	10	0	9.80	98.0	98
Arsenic	500-6018-1	10	0	9.49	94.9	95

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 13 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Arsenic	500-6078-1	10	0	8.75	87.5	87
Copper	500-6079-1	25	0	24.30	97.2	97
Lead	500-6079-1	10	0	9.55	95.5	95
Silver	500-6079-1	5	0	4.52	90.4	90
Zinc	500-6079-1	50	0	46.30	92.6	93
Lead	500-6111-1	10	0	10.20	102.0	102
Copper	500-6133-1	25	0	24.00	96.0	96
Zinc	500-6133-1	50	0	48.10	96.2	96
Arsenic	500-6237-1	10	0	9.39	93.9	94
Copper	500-6262-1	25	0	24.30	97.2	97
Zinc	500-6262-1	50	0	44.90	89.8	90
Arsenic	500-6238-1	10	0	9.26	92.6	93
Copper	500-6238-1	25	0	25.30	101.2	101
Lead	500-6238-1	10	0	9.75	97.5	98
Silver	500-6238-1	5	0	4.72	94.4	94
Zinc	500-6238-1	50	0	47.40	94.8	95
Arsenic	500-6592-1	10	0	9.28	92.8	93
Barium	500-6592-1	200	0	191.00	95.5	96
Chromium	500-6592-1	20	0	19.70	98.5	98
Copper	500-6592-1	25	0	24.60	98.4	98
Lead	500-6592-1	10	0	9.95	99.5	100
Silver	500-6592-1	5	0	4.61	92.2	92
Zinc	500-6592-1	50	0	48.70	97.4	97
Antimony	500-6112-1	50	0	47.00	94.0	94
Arsenic	500-6112-1	10	0	9.49	94.9	95
Cadmium	500-6112-1	5	0	4.76	95.2	95
Copper	500-6112-1	25	0	24.90	99.6	99

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Lead	500-6112-1	10	0	9.95	99.5	99
Silver	500-6112-1	5	0	4.70	94.0	94
Thallium	500-6112-1	10	0	9.51	95.1	95
Zinc	500-6112-1	50	0	48.10	96.2	96
Antimony	500-6332-1	50	0	64.40	128.8	93
Arsenic	500-6332-1	10	0	9.41	94.1	94
Cadmium	500-6332-1	5	0	4.72	94.4	94
Copper	500-6332-1	25	0	24.60	98.4	98
Lead	500-6332-1	10	0	9.86	98.6	99
Silver	500-6332-1	5	0	4.67	93.4	93
Thallium	500-6332-1	10	0	9.09	90.9	91
Zinc	500-6332-1	50	0	51.30	102.6	103
Arsenic	500-6332-1	10	0	9.41	94.1	94
Lead	500-6412-1	10	0	9.62	96.2	96
Arsenic	500-6444-1	10	0	9.05	90.5	90
Copper	500-6444-1	25	0	24.10	96.4	96
Lead	500-6444-1	10	0	9.63	96.3	96
Zinc	500-6444-1	50	0	47.50	95.0	95
Arsenic	500-6467-1	10	0	9.20	92.0	92
Copper	500-6467-1	25	0	24.70	98.8	99
Lead	500-6467-1	10	0	9.69	96.9	97
Zinc	500-6467-1	50	0	47.90	95.8	96
Lead	500-6503-1	10	0	9.57	95.7	96
Copper	500-6506-1	25	0	24.70	98.8	99
Lead	500-6506-1	10	0	9.57	95.7	96
Silver	500-6506-1	5	0	4.66	93.2	93
Zinc	500-6506-1	50	0	46.00	92.0	92

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Copper	500-6513-1	25	0	23.80	95.2	95
Arsenic	500-6550-1	10	0	9.15	91.5	91
Lead	500-6621-1	10	0	9.73	97.3	97
Chromium	500-6622-1	20	0	19.40	97.0	97
Lead	500-6622-1	10	0	9.73	97.3	97
Chromium	500-6650-1	20	0	19.00	95.0	95
Copper	500-6650-1	25	0	24.00	96.0	96
Lead	500-6650-1	10	0	9.46	94.6	95
Lead	500-6651-1	10	0	9.46	94.6	95
Lead	500-6687-1	10	0	9.57	95.7	96
Arsenic	500-6713-1	10	0	8.86	88.6	89
Barium	500-6713-1	200	0	185.00	92.5	93
Cadmium	500-6713-1	5	0	4.66	93.2	93
Chromium	500-6713-1	20	0	19.00	95.0	95
Lead	500-6713-1	10	0	9.61	96.1	96
Selenium	500-6713-1	10	0	8.57	85.7	86
Silver	500-6713-1	5	0	4.68	93.6	94
Mercury	500-6713-1	0.167	0	0.18	110.2	110
Copper	500-6714-1	10	0	9.83	98.3	98
Lead	500-6714-1	25	0	23.90	95.6	96
Zinc	500-6714-1	50	0	48.40	96.8	97
Copper	500-6743-1	25	0	24.50	98.0	98
Arsenic	500-6812-1	10	0	9.09	90.9	91
Barium	500-6812-1	200	0	179.00	89.5	90
Copper	500-6812-1	25	0	23.60	94.4	95
Lead	500-6812-1	10	0	9.54	95.4	95
Zinc	500-6812-1	50	0	46.80	93.6	94

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Lead	500-6900-1	10	0	9.64	96.4	96
Lead	500-7026-1	10	0	9.37	93.7	94
Arsenic	500-7047-1	10	0	9.20	92.0	92
Barium	500-7047-1	200	0	183.00	91.5	92
Chromium	500-7047-1	20	0	18.70	93.5	93
Copper	500-7047-1	25	0	24.20	96.8	97
Lead	500-7047-1	10	0	9.41	94.1	94
Silver	500-7047-1	5	0	4.54	90.8	91
Zinc	500-7047-1	50	0	46.40	92.8	93
Lead	500-7145-1	10	0	9.80	98.0	98
Lead	500-7513-1	10	0	9.66	96.6	97
Antimony	500-14347	50	0	47.2	94.4	94
Arsenic	500-14347	10	0	9.4	94.3	94
Cadmium	500-14347	5	0	4.9	98.2	98
Chromium	500-14347	20	0	20.2	101.0	101
Copper	500-14347	25	0	25.2	100.8	101
Lead	500-14347	10	0	10.3	103.0	103
Zinc	500-14347	50	0	49.5	99.0	99
Thallium	500-14347	5	0	4.1	82.8	83
Groundwater Metals Samples (mg/L)						
Lead	248135	0.1	0	0.10022	100.2	100
Lead	248160	0.1	0	0.10022	100.2	100
Lead	248182	0.1	0	0.10001	100.0	100
Lead	248208	0.1	0	0.10463	104.6	105
Lead	248233	0.1	0	0.10141	101.4	101
Lead	248248	0.1	0	0.09733	97.3	97
Lead	248271	0.1	0	0.10379	103.8	104

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Lead	248312	0.1	0	0.09941	99.4	99
Arsenic	248315	0.1	0	0.09492	94.9	95
Lead	248357	0.1	0	0.10245	102.5	102
Lead	248423	0.1	0	0.09615	96.2	96
Lead	248454	0.1	0	0.09625	96.3	96
Lead	248537	0.1	0	0.09952	99.5	100
Lead	248926	0.1	0	0.09841	98.4	98
Lead	248927	0.1	0	0.09841	98.4	98
Lead	249025	0.1	0	0.09879	98.8	99
Lead	249072	0.1	0	0.10165	101.7	102
Lead	249106	0.1	0	0.09825	98.3	98
Lead	249117	0.1	0	0.09497	95.0	95
Lead	249144	0.1	0	0.09550	95.5	96
Lead	249145	0.1	0	0.09550	95.5	96
Lead	249220	0.1	0	0.09978	99.8	100
Lead	249221	0.1	0	0.09978	99.8	100
Lead	249477	0.1	0	0.09666	96.7	97
Lead	249239	0.1	0	0.09809	98.1	98
Lead	249240	0.1	0	0.09636	96.4	96
Lead	249276	0.1	0	0.09731	97.3	97
Lead	249398	0.1	0	0.09959	99.6	100
Lead	249398	0.1	0	0.10020	100.2	100
Lead	249439	0.1	0	0.10267	102.7	103
Lead	249487	0.1	0	0.09666	96.7	97
Lead	249510	0.1	0	0.09674	96.7	97
Lead	249511	0.1	0	0.09674	96.7	97
Lead	249544	0.1	0	0.09769	97.7	98

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 18 of 20)

Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Lead	249563	0.1	0	0.10163	101.6	102
Lead	249576	0.1	0	0.10163	101.6	102
Lead	249602	0.1	0	0.09926	99.3	99
Lead	249603	0.1	0	0.09926	99.3	99
Lead	249616	0.1	0	0.09664	96.6	97
Lead	249623	0.1	0	0.09329	93.3	93
Lead	249634	0.1	0	0.09503	95.0	95
Lead	249645	0.1	0	0.09881	98.8	99
Lead	249674	0.1	0	0.09927	99.3	99
Lead	249743	0.1	0	0.10009	100.1	100
Lead	249754	0.1	0	0.09478	94.8	95
Lead	249776	0.1	0	0.09695	97.0	97
Lead	249777	0.1	0	0.09898	99.0	99
Lead	249895	0.1	0	0.09704	97.0	97
Lead	249895	0.1	0	0.09845	98.5	98
Lead	249945	0.1	0	0.09603	96.0	96
Lead	249973	0.1	0	0.09400	94.0	94
Lead	250023	0.1	0	0.09528	95.3	95
Lead	250056	0.1	0	0.09675	96.8	97
Lead	250183	0.1	0	0.09734	97.3	97
Lead	250192	0.1	0	0.09679	96.8	97
Lead	250263	0.1	0	0.09390	93.9	94
Lead	250415	0.1	0	0.09667	96.7	97
Lead	250104	0.1	0	0.09723	97.2	97
Lead	250472	0.1	0	0.10037	100.4	100
Antimony	250473	0.5	0	0.47551	95.1	95
Barium	250473	2	0	1.91299	95.6	96

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Chromium	250473	0.2	0	0.19270	96.4	96
Lead	250473	0.1	0	0.10080	100.8	101
Zinc	250473	0.5	0	0.46784	93.6	94
Lead	250541	0.1	0	0.09975	99.8	100
Lead	250548	0.1	0	0.10256	102.6	103
Lead	250561	0.1	0	0.09993	99.9	100
Lead	250586	0.1	0	0.10222	102.2	102
Arsenic	500-4598-2	0.1	0	0.09390	93.9	94
Cadmium	500-4598-2	0.05	0	0.04780	95.6	96
Copper	500-4598-2	0.25	0	0.24400	97.6	98
Lead	500-4598-2	0.1	0	0.09740	97.4	97
Silver	500-4598-2	0.05	0	0.04350	87.0	87
Zinc	500-4598-2	0.5	0	0.47600	95.2	95
Lead	500-5122-1	0.1	0	0.09800	98.0	98
Lead	500-5286-2	0.1	0	0.09720	97.2	97
Arsenic	500-5529-1	0.1	0	0.08910	89.1	89
Arsenic	500-5427-1	0.1	0	0.09340	93.4	93
Barium	500-5427-1	2	0	1.94000	97.0	97
Cadmium	500-5427-1	0.05	0	0.04950	99.0	99
Copper	500-5427-1	0.25	0	0.25500	102.0	102
Lead	500-5427-1	0.1	0	0.10200	102.0	102
Silver	500-5427-1	0.05	0	0.04450	89.0	89
Zinc	500-5427-1	0.5	0	0.50100	100.2	100
Lead	500-5658-1	0.1	0	0.10600	106.0	106
Lead	500-5718-1	0.1	0	0.09620	96.2	96
Lead	500-5767-1	0.1	0	0.10000	100.0	100
Lead	500-5974-1	0.1	0	0.10300	103.0	103

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-4

Metals Laboratory Control Sample Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

SDG: Various
Sample Identification: Blanks

Laboratory Control Sample Recovery Check.

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

Percent Recovery (%R) = (SSC – SC)/SA x 100

Compound	SDG	Spike Added (mg/L)	Blank Concentration (mg/L)	LCS Concentration (mg/L)	%R Recalculated	% R Reported
Lead	500-6015-1	0.1	0	0.10400	104.0	104
Lead	500-6053-1	0.1	0	0.10000	100.0	100
Lead	500-6091-1	0.1	0	0.09810	98.1	98
Lead	500-6111-1	0.1	0	0.10000	100.0	100
Arsenic	500-6235-1	0.1	0	0.09660	96.6	97
Arsenic	500-6088-1	0.1	0	0.09290	92.9	93
Cadmium	500-6088-1	0.05	0	0.04920	98.4	98
Copper	500-6088-1	0.25	0	0.25500	102.0	102
Lead	500-6088-1	0.1	0	0.09950	99.5	100
Silver	500-6088-1	0.05	0	0.04870	97.4	97
Zinc	500-6088-1	0.5	0	0.48300	96.6	97
Arsenic	500-6089-1	0.1	0	0.09290	92.9	93
Barium	500-6089-1	2	0	2.01000	100.5	100
Chromium	500-6089-1	0.2	0	0.20100	100.5	100
Copper	500-6089-1	0.25	0	0.25500	102.0	102
Lead	500-6089-1	0.1	0	0.09950	99.5	100
Silver	500-6089-1	0.05	0	0.04870	97.4	97
Zinc	500-6089-1	0.5	0	0.48300	96.6	97
Lead	500-6750-1	0.1	0	0.09710	97.1	97
Lead	500-7025-1	0.1	0	0.09740	97.4	97
Lead	500-7162-1	0.1	0	0.09550	95.5	95
Lead	500-7607-1	0.1	0	0.09600	96.0	96

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-5

Metals Matrix Spike Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 6)

Laboratory: Severn Trent

MATRIX SPIKE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC - SC)/SA x 100

Where: SSC = Spiked Sample Result
SC = Sample Result
SA = Spike amount added

SDG	Sample Identification	Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added	Matrix Spike %R	
						Reported	Recalculated
Soil Metals Samples (mg/kg)							
247739	JPM3-OTF-AP19(1)	Lead	31.8600	21.39	11.81	89	88.65
247739	JPM3-OTF-AP19(1)	Zinc	132.3300	83.13	59.07	83	83.29
247748	JPM3-ITF-AP8(1)	Arsenic	23.46	15.05	11.44	74	73.51
247748	JPM3-ITF-AP8(1)	Copper	81.94	51.28	28.59	107	107.24
247748	JPM3-ITF-AP8(1)	Zinc	347.42	255.78	57.19	160	160.24
247836	JPM3-ITF-AP16(1)	Lead	595.70	508.51	10.39	839	839.17
247884	JPM3-ITF-AF46(2)	Antimony	24.27	0.95	62.17	39	37.51
247884	JPM3-ITF-AF46(2)	Copper	63.98	32.68	31.09	101	100.68
247884	JPM3-ITF-AF46(2)	Lead	26.83	17.12	12.43	78	78.12
247884	JPM3-ITF-AF46(2)	Silver	5.65	0.12	6.22	91	88.91
247884	JPM3-ITF-AF46(2)	Thallium	10.29	0.71	12.43	83	77.07
247884	JPM3-ITF-AF46(2)	Zinc	120.23	64.56	62.17	90	89.54
248048	JPM3-ITF-AF75(2)	Lead	99.36	116.66	12.52	-138	-138.18
248048	JPM3-ITF-AF75(2)	Zinc	184.25	155.22	62.59	46	46.38
248301	JPM3-ITF-AF140(2)	Lead	96.73	94.67	11.78	17	17.49
248307	JPM3-ITF-AF130(2)-D	Copper	39.32	15.99	26.15	89	89.22
248357	JPM3-ITF-AF143(2)	Lead	4.70	0.17969	5	90	90.44
248981	JPM3-ITF-AF184(2)	Lead	30.94	19.52	12.8	89	89.22
249049	JPM4-CP2	Lead	41.78	29.52	13.69	90	89.55
249049	JPM4-CP25	Lead	65.20	47.09	14.58	124	124.21
249144	JPM3-CP7-18	Lead	618.66	419.27	12.39	1609	1609.28
249144	JPM3-CP7-22	Lead	2497.73	1191.49	12.3	10616	10619.84
249177	JPM3-ITF-AF220(2)	Lead	54.05	40.35	12.67	108	108.13
249177	JPM3-ITF-AF220(2)	Zinc	123.03	71.42	63.37	81	81.44
249398	JPM3-ITF-CP1-15(1)	Lead	2537.39	3234.94	9.48	-7361	-7358.12
249398	JPM3-ITF-CP1-15(1)	Arsenic	35.24	26.73	9.48	90	89.77
249398	JPM3-ITF-CP1-15(1)	Cadmium	6.19	2.23	4.74	84	83.54
249398	JPM3-ITF-CP1-15(1)	Copper	287.60	292	23.69	-19	-18.57
249439	JPM3-ITF-AF236(2)	Lead	205.8600	145.83	11.52	521	521.09
249510	JPM3-ITF-CP-1-22(.5)	Lead	333.38	363.96	10.62	-288	-287.95
249544	JPM12-AP1(1)	Lead	1303.96	1720.84	12.39	-3365	-3364.65
249563	JPM12-AF4(2)	Lead	28.93	20.72	11.65	70	70.47
249576	JPM12-AF5(2)	Lead	55.08	53.27	14.58	12	12.41
249602	JPL2-ASH	Lead	9853.73	13143.12	204.3	-1610.3	-32201.57
249616	JPM12-AP44(1)	Lead	2771.84	1879.44	15.7	5685	5684.08
249623	JPM12-AP45(1)	Lead	106.94	120.9	12.56	-111	-111.15
249674	JPM12-AP72(1)	Lead	147.64	127.14	15.55	132	131.83
249743	JPM12-AP82(1)	Lead	34.46	20.06	14.55	99	98.97
249777	JPM4-AP6(1)	Lead	1037.34	904.95	15.86	835	834.74
249777	JPM4-AF4(2)	Lead	965.33	1173.28	14.94	-1392	-1391.90
249944	JPM3-ITF-AF253(3)	Arsenic	25.12	9.01	13.76	117	117.08
249944	JPM3-ITF-AF253(3)	Cadmium	6.49	0.44	6.88	88	87.94
249944	JPM3-ITF-AF253(3)	Copper	85.98	56.96	34.4	84	84.36
249944	JPM3-ITF-AF253(3)	Lead	208.58	165.52	13.76	313	312.94
250183	JPM3-ITF-AF259(2)	Lead	20.97	11.15	11.92	82	82.38
250263	JPL2-AP53(1)	Arsenic	16.53	6.45	11.78	86	85.57
250263	JPL2-AP53(1)	Cadmium	5.55	0.54	5.89	85	85.06
250263	JPL2-AP53(1)	Copper	48.75	20.38	29.45	96	96.33
250263	JPL2-AP53(1)	Lead	25.49	14.1	11.78	97	96.69
250263	JPL2-AP53(1)	Silver	4.89	0	5.89	83	83.02
250263	JPL2-AP53(1)	Zinc	120.78	70.48	58.89	85	85.41

SDG - sample delivery group
mg/kg - milligram per kilogram
mg/L - milligram per liter

Table I-5
Metals Matrix Spike Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 6)

Laboratory: Severn Trent

MATRIX SPIKE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
 SC = Sample Result
 SA = Spike amount added

SDG	Sample Identification	Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added	Matrix Spike %R	
						Reported	Recalculated
250373	JPL2-TOTAL METAL-(PROFILE)	Arsenic	20.22	10.09	11.44	89	88.55
250373	JPL2-TOTAL METAL-(PROFILE)	Cadmium	87.91	88.77	5.72	-15	-15.03
250373	JPL2-TOTAL METAL-(PROFILE)	Copper	10866.52	2947.43	136.6	28976	5797.28
250373	JPL2-TOTAL METAL-(PROFILE)	Lead	1541.42	499.72	54.66	9529	1905.78
250373	JPL2-TOTAL METAL-(PROFILE)	Silver	42.36	132.76	27.33	-1654	-330.77
250373	JPL2-TOTAL METAL-(PROFILE)	Zinc	45452.81	2686.09	2733	78243	1564.83
250387	JPL2-AP95(0.5)	Copper	83.47	47.79	29.14	122	122.44
250431	JPL2-AF52(2)	Arsenic	24.99	13.46	11.76	98	98.04
250431	JPL2-AF52(2)	Cadmium	4.70	0	5.88	80	79.93
250431	JPL2-AF52(2)	Copper	62.49	32.35	29.4	103	102.52
250431	JPL2-AF52(2)	Lead	30.55	20.14	11.76	89	88.52
250431	JPL2-AF52(2)	Silver	5.12	0	5.88	87	87.07
250431	JPL2-AF52(2)	Zinc	128.88	71.38	58.79	98	97.81
250051	JPL3-CP2(1)	Chromium	44.33	19.35	25.62	97	97.50
250051	JPL3-CP2(1)	Copper	160.71	113.93	32.03	146	146.05
250051	JPL3-CP2(1)	Lead	117.17	117.27	12.81	-1	-0.78
250051	JPL3-CP16(1)	Copper	67.75	30.22	33.07	113	113.49
250051	JPL3-CP16(1)	Lead	64.34	52.07	13.23	93	92.74
250051	JPL3-CP16(1)	Silver	6.48	0.47	6.61	98	90.92
250051	JPL3-CP16(1)	Zinc	156.55	97.14	66.13	90	89.84
250165	JPM3-ITF-AF255(2)	Antimony	20.85	0.49	57.19	36	35.60
250165	JPM3-ITF-AF255(2)	Copper	46.27	23.1	28.6	81	81.01
250165	JPM3-ITF-AF255(2)	Silver	4.67	0	5.72	82	81.64
250165	JPM3-ITF-AF255(2)	Thallium	10.48	0	11.44	92	91.61
250165	JPM3-ITF-AF255(2)	Zinc	108.55	65.82	57.19	75	74.72
250165	JPM3-ITF-AF255(2)	Lead	27.10	17.26	12.58	78	78.22
250224	JPM3-ITF-AF208B(1)	Arsenic	14.65	7.38	9.03	81	80.51
250224	JPM3-ITF-AF208B(1)	Copper	30.57	12.51	22.57	80	80.02
250429	JPL2-AP101(0.5)	Copper	291.39	195.80	28.72	333	332.83
250472	JPL23A-AP1(1)	Antimony	18.92	0	62.98	30	30.04
250472	JPL23A-AP1(1)	Arsenic	20.84	9.25	12.6	92	91.98
250472	JPL23A-AP1(1)	Barium	367.54	135.95	251.9	92	91.94
250472	JPL23A-AP1(1)	Chromium	45.78	18.81	25.19	107	107.07
250472	JPL23A-AP1(1)	Copper	62.98	21.02	31.49	133	133.25
250472	JPL23A-AP1(1)	Lead	50.04	29.34	12.6	164	164.29
250472	JPL23A-AP1(1)	Nickel	77.49	17.8	62.98	95	94.78
250472	JPL23A-AP1(1)	Zinc	178.70	78.11	62.98	160	159.72
250472	JPL23A-AP4(4)	Antimony	16.91	0	58.4	29	28.96
250472	JPL23A-AP4(4)	Arsenic	21.38	9.23	11.68	104	104.02
250472	JPL23A-AP4(4)	Barium	273.97	58.98	233.6	92	92.03
250472	JPL23A-AP4(4)	Chromium	43.92	18.25	23.36	110	109.89
250472	JPL23A-AP4(4)	Copper	51.63	24.60	29.2	93	92.57
250472	JPL23A-AP4(4)	Lead	23.11	11.74	11.68	97	97.35
250472	JPL23A-AP4(4)	Nickel	79.91	28.60	58.4	88	87.86
250472	JPL23A-AP4(4)	Zinc	112.31	60.11	58.4	89	89.38
250595	JPL2-AP109(0.5)	Arsenic	18.42	6.63	10.7	110	110.19
250595	JPL2-AP109(0.5)	Cadmium	17.48	15.83	5.35	31	30.84
250595	JPL2-AP109(0.5)	Copper	4204.29	2090.99	26.75	7900	7900.19
250595	JPL2-AP109(0.5)	Lead	405.59	293.59	10.7	1047	1046.73
250595	JPL2-AP109(0.5)	Silver	11.08	17.44	5.35	-119	-118.88
250595	JPL2-AP109(0.5)	Zinc	3241.22	1712.41	535	285.7	285.76
250534	JPL23A-AP21(1)	Antimony	15.99	0	55.75	29	28.68

SDG - sample delivery group
 mg/kg - milligram per kilogram
 mg/L - milligram per liter

Table I-5
Metals Matrix Spike Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 3 of 6)

Laboratory: Severn Trent

MATRIX SPIKE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
 SC = Sample Result
 SA = Spike amount added

SDG	Sample Identification	Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added	Matrix Spike %R	
						Reported	Recalculated
250534	JPL23A-AP21(1)	Barium	308.04	99.66	223	93	93.44
250534	JPL23A-AP21(1)	Chromium	40.77	14.79	22.3	116	116.50
250534	JPL23A-AP21(1)	Lead	22.95	12.48	11.15	94	93.90
250534	JPL23A-AP21(1)	Zinc	99.19	48.38	55.75	91	91.14
250536	JPL23A-AP25(1)	Antimony	15.27	0	52.99	29	28.82
250536	JPL23A-AP25(1)	Barium	249.94	62.85	212	88	88.25
250536	JPL23A-AP25(1)	Chromium	38.32	15.64	21.2	107	106.98
250536	JPL23A-AP25(1)	Lead	23.68	13.33	10.6	98	97.64
250536	JPL23A-AP25(1)	Zinc	103.01	57.28	52.99	86	86.30
250536	JPL23A-AP29(1)	Antimony	16.24	0	55.25	29	29.39
250536	JPL23A-AP29(1)	Barium	282.87	104.82	221	81	80.57
250536	JPL23A-AP29(1)	Chromium	40.78	17.83	22.1	104	103.85
250536	JPL23A-AP29(1)	Lead	23.51	14.49	11.05	82	81.63
250536	JPL23A-AP29(1)	Zinc	110.87	64.04	55.25	85	84.76
250557	JPL23A-AP31(1)	Zinc	253.28	261.71	58.06	-15	-14.52
250548	JPM12-STOCKPILE-1(0)	Lead	269.89	257.71	11.51	106	105.82
250595	JPL2-AP109(0.5)	Arsenic	18.4	6.63	10.7	110	110.19
250595	JPL2-AP109(0.5)	Cadmium	17.5	15.83	5.35	31	30.84
250595	JPL2-AP109(0.5)	Copper	4204.3	2090.99	26.75	7900	7900.19
250595	JPL2-AP109(0.5)	Lead	405.6	293.59	10.7	1047	1046.73
250595	JPL2-AP109(0.5)	Silver	11.1	17.44	5.35	-119	-118.88
250595	JPL2-AP109(0.5)	Zinc	3241.2	1712.41	535	2857	285.76
500-4270-2	JPL2-AP120(0.5)	Arsenic	20.5	8.8	11.9	98	98.32
500-4270-2	JPL2-AP120(0.5)	Cadmium	7.4	1.6	5.95	97	97.48
500-4270-2	JPL2-AP120(0.5)	Copper	353.0	190	29.8	537	546.98
500-4270-2	JPL2-AP120(0.5)	Lead	55.9	33	11.9	189	192.44
500-4270-2	JPL2-AP120(0.5)	Silver	6.6	1.3	5.95	89	89.08
500-4270-2	JPL2-AP120(0.5)	Zinc	394.0	240	59.5	258	258.82
500-4317-4	JPL2-AST-TF2(4)	Arsenic	22.2	11	11.6	98	96.55
500-4317-4	JPL2-AST-TF2(4)	Cadmium	5.1	0.097	5.82	86	86.13
500-4317-4	JPL2-AST-TF2(4)	Copper	55.4	28	29.1	95	94.16
500-4317-4	JPL2-AST-TF2(4)	Lead	25.7	14	11.6	102	100.86
500-4317-4	JPL2-AST-TF2(4)	Silver	5.3	0	5.82	92	91.58
500-4317-4	JPL2-AST-TF2(4)	Zinc	116.0	66	58.2	85	85.91
500-4317-4	JPL2-AST-TP3(0.5)	Arsenic	15.6	6.6	9.39	96	95.85
500-4317-4	JPL2-AST-TP3(0.5)	Cadmium	6.0	1.5	4.69	97	95.95
500-4317-4	JPL2-AST-TP3(0.5)	Copper	1310.0	56	23.5	5340	5336.17
500-4317-4	JPL2-AST-TP3(0.5)	Lead	96.6	24	9.39	769	773.16
500-4317-4	JPL2-AST-TP3(0.5)	Silver	5.8	1.3	4.69	96	96.59
500-4317-4	JPL2-AST-TP3(0.5)	Zinc	635.0	76	46.9	1190	1191.90
500-4472-4	JPL2-AP126(0.5)	Lead	44.3	33	11.6	100	97.41
500-4472-4	JPL2-AF59(2)	Lead	29.0	18	11.9	92	92.44
500-4661-2	JPWR-369-1W-1	Lead	39.6	57	16.6	-103	-104.82
500-4662-2	JPWR370-1E-2	Lead	27.2	22	13.1	43	39.69
500-5055-1	JPL3-BARREL-White Substance	Antimony	49.7	0	92.4	54	53.79
500-5122-1	JPM4-AP14(0.5)	Lead	316.0	290	11	234	236.36
500-5265-1	JPL5-PCN-1(3)	Arsenic	23.7	12	10.4	116	112.50
500-5265-1	JPL5-PCN-1(3)	Copper	742.0	280	26.1	1790	1770.11
500-5265-1	JPL5-PCN-1(3)	Lead	208.0	140	10.4	622	653.85
500-5265-1	JPL5-PCN-1(3)	Thallium	9.1	0	10.4	87	87.40
500-5265-1	JPL5-PCN-1(3)	Zinc	1020.0	870	52.2	292	287.36
500-5285-1	JPL5-PCN-11(3)	Lead	22.6	14	10.4	80	82.69

SDG - sample delivery group
 mg/kg - milligram per kilogram
 mg/L - milligram per liter

Table I-5
Metals Matrix Spike Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

MATRIX SPIKE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
 SC = Sample Result
 SA = Spike amount added

SDG	Sample Identification	Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added	Matrix Spike %R	
						Reported	Recalculated
500-5306-1	JPL5-15(0)	Lead	59.4	72	10.9	-119	-115.60
500-5347-1	JPL3-DITCH-1(0)	Arsenic	22.3	18	11	35	39.09
500-5499-1	JPL5-AP13(0.5)	Antimony	15.8	0	52.9	30	29.87
500-5499-1	JPL5-AP13(0.5)	Arsenic	18.9	9.9	10.6	85	84.91
500-5499-1	JPL5-AP13(0.5)	Cadmium	5.2	0.58	5.29	87	87.15
500-5499-1	JPL5-AP13(0.5)	Copper	47.0	23	26.5	90	90.57
500-5499-1	JPL5-AP13(0.5)	Lead	31.3	20	10.6	107	106.60
500-5499-1	JPL5-AP13(0.5)	Silver	4.6	0	5.29	86	86.20
500-5499-1	JPL5-AP13(0.5)	Thallium	10.0	0.74	10.6	87	86.89
500-5499-1	JPL5-AP13(0.5)	Zinc	113.0	64	52.9	93 B	92.63
500-5501-1	JPL5-AP35(0.5)	Antimony	15.4	0	53.5	29	28.79
500-5501-1	JPL5-AP35(0.5)	Arsenic	18.4	8.0	10.7	97	97.20
500-5501-1	JPL5-AP35(0.5)	Cadmium	4.7	0.22	5.35	84	83.55
500-5501-1	JPL5-AP35(0.5)	Copper	43.3	17	26.8	97	98.13
500-5501-1	JPL5-AP35(0.5)	Lead	24.9	16	10.7	81	83.18
500-5501-1	JPL5-AP35(0.5)	Silver	4.3	0	5.35	80	80.00
500-5501-1	JPL5-AP35(0.5)	Thallium	10.4	1.3	10.7	85	85.05
500-5501-1	JPL5-AP35(0.5)	Zinc	102.0	50	53.5	97	97.20
500-5719-1	JPL3-STOCKPILE-2(0)	Arsenic	17.2	7.9	10.3	90	90.29
500-5719-1	JPL3-STOCKPILE-2(0)	Barium	275.0	95	206	88	87.38
500-5719-1	JPL3-STOCKPILE-2(0)	Chromium	37.0	18	20.6	92	92.23
500-5719-1	JPL3-STOCKPILE-2(0)	Copper	145.0	130	25.8	73	58.14
500-5719-1	JPL3-STOCKPILE-2(0)	Lead	170.0	170	10.3	33	0.00
500-5719-1	JPL3-STOCKPILE-2(0)	Silver	6.6	2	5.15	90	89.32
500-5719-1	JPL3-STOCKPILE-2(0)	Zinc	408.0	360	51.5	95	93.20
500-5933-1	JPL5-PCN2-1(5)	Arsenic	24.6	14	12.9	80	82.17
500-5933-1	JPL5-PCN2-1(5)	Copper	69.6	39	32.3	95	94.74
500-5933-1	JPL5-PCN2-1(5)	Lead	30.2	19	12.9	90	86.82
500-5933-1	JPL5-PCN2-1(5)	Thallium	139.0	80	64.5	91	91.47
500-5933-1	JPL5-PCN2-1(5)	Zinc	14.4	2.2	12.9	95	94.57
500-5954-1	JPL5-PCN2-11(5)	Lead	22.8	15	10.8	70	72.22
500-5975-1	JPM4-AP36(0.5)	Lead	26.0	17	12.0	75	75.00
500-6018-1	JPL5-AF24(4)	Arsenic	59.1	41	11.1	165	163.06
500-6079-1	JPL2-SP17(1)	Copper	43.0	16	29.7	91	90.91
500-6079-1	JPL2-SP17(1)	Lead	108.0	55	59.3	88	89.38
500-6079-1	JPL2-SP17(1)	Silver	5.13	0.24	5.93	82	82.46
500-6079-1	JPL2-SP17(1)	Zinc	108.0	55	59.3	88	89.38
500-6111-1	JPM4-AP59(0.5)	Lead	67.0	55	14.0	83	85.71
500-6133-1	JPL2-AP137(0.5)	Copper	583.0	630	28.5	-180	-164.91
500-6133-1	JPL2-AP137(0.5)	Zinc	753.0	840	57.0	-146	-152.63
500-6237-1	JPL5-AF27(5)	Arsenic	31.5	22	11.3	84	84.07
500-6262-1	JPL2-AP147(0.5)	Copper	59.1	29	31.4	97	95.86
500-6262-1	JPL2-AP147(0.5)	Zinc	129.0	72	62.7	91	90.91
500-6238-1	JPL2-AP139(1)	Arsenic	24.6	15	11.9	80	80.67
500-6238-1	JPL2-AP139(1)	Copper	62.2	36	29.8	88	87.92
500-6238-1	JPL2-AP139(1)	Lead	30.1	21	11.9	80	76.47
500-6238-1	JPL2-AP139(1)	Silver	5.8	0.45	5.96	89	89.43
500-6238-1	JPL2-AP139(1)	Zinc	136.0	86	59.6	84	83.89
500-6592-1	JPL3-AP12(1)	Arsenic	34.1	18	10.2	161	157.84
500-6592-1	JPL3-AP12(1)	Barium	452.0	430	204	13	10.78
500-6592-1	JPL3-AP12(1)	Chromium	53.4	26	20.4	136	134.31
500-6592-1	JPL3-AP12(1)	Copper	356.0	260	25.5	387	376.47

SDG - sample delivery group
 mg/kg - milligram per kilogram
 mg/L - milligram per liter

Table I-5
Metals Matrix Spike Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 5 of 6)

Laboratory: Severn Trent

MATRIX SPIKE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
 SC = Sample Result
 SA = Spike amount added

SDG	Sample Identification	Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added	Matrix Spike %R	
						Reported	Recalculated
500-6592-1	JPL3-AP12(1)	Lead	251.0	190	10.2	603	598.04
500-6592-1	JPL3-AP12(1)	Silver	5.8	0.84	5.09	98	97.84
500-6592-1	JPL3-AP12(1)	Zinc	912.0	710	50.9	393	396.86
500-6112-1	JPL5-SP1(1)	Antimony	20.7	1.0	63.0	31	31.27
500-6112-1	JPL5-SP1(1)	Arsenic	21.9	10	12.6	92	94.44
500-6112-1	JPL5-SP1(1)	Cadmium	6.0	0.56	6.3	86	86.19
500-6112-1	JPL5-SP1(1)	Copper	50.4	22	31.5	91	90.16
500-6112-1	JPL5-SP1(1)	Lead	37.6	28	12.6	75	76.19
500-6112-1	JPL5-SP1(1)	Silver	5.6	0.14	6.30	86	86.35
500-6112-1	JPL5-SP1(1)	Thallium	10.2	0	1.6	81	637.50
500-6112-1	JPL5-SP1(1)	Zinc	137.0	78	63.0	93	93.65
500-6332-1	JPL5-AP42(0.5)	Antimony	18.3	3.3	52.6	29	28.52
500-6332-1	JPL5-AP42(0.5)	Arsenic	23.6	17	10.5	66	62.86
500-6332-1	JPL5-AP42(0.5)	Cadmium	12.2	11	5.26	23	22.81
500-6332-1	JPL5-AP42(0.5)	Copper	425.0	1000	26.3	-2220	-2186.31
500-6332-1	JPL5-AP42(0.5)	Lead	147.0	300	10.5	-1450	-1457.14
500-6332-1	JPL5-AP42(0.5)	Silver	5.4	1.3	5.26	77	77.76
500-6332-1	JPL5-AP42(0.5)	Thallium	8.6	0	10.5	81	81.62
500-6332-1	JPL5-AP42(0.5)	Zinc	1370.0	2000	52.6	-1100	-1197.72
500-6412-1	JPM4-AP61(0.5)	Lead	67.8	50	12.7	140	140.16
500-6444-1	JPL5-AF31(3)	Arsenic	19.2	14	11.0	50	47.27
500-6444-1	JPL5-AF31(3)	Copper	44.8	30	27.4	54	54.01
500-6444-1	JPL5-AF31(3)	Lead	18.9	14	11.0	46	44.55
500-6444-1	JPL5-AF31(3)	Zinc	86.9	71	54.9	28	28.96
500-6650-1	JPL5-AP52(0.5)	Arsenic	20.4	8.9	9.61	119	119.67
500-6650-1	JPL3-AP25(0.5)	Chromium	45.3	18	24.8	110	110.08
500-6650-1	JPL3-AP25(0.5)	Copper	67.2	40	30.9	89	88.03
500-6650-1	JPL3-AP25(0.5)	Lead	48.2	35	12.4	108	106.45
500-6687-1	JPM4-AP64(0.5)	Lead	28.3	18	12.7	85	81.10
500-6743-1	JPL3-AP33(0.5)	Copper	44.4	19	26.6	95	95.49
500-6812-1	JPL3-AF27(2)	Arsenic	22.1	11	11.3	94	98.23
500-6812-1	JPL3-AF27(2)	Barium	336.0	130	226	92	91.15
500-6812-1	JPL3-AF27(2)	Copper	43.5	17	28.3	95	93.64
500-6812-1	JPL3-AF27(2)	Lead	27.1	17	11.3	93	89.38
500-6812-1	JPL3-AF27(2)	Zinc	116.0	62	56.6	94	95.41
500-7026-1	JPM4-DEMO DEBRIS-100507	Lead	9.6	0.46	10.1	90	90.40
500-7145-1	JPM4-POST-SB1-NW	Lead	26.4	19	11.6	68	63.79
500-14347	JPL5-RS-AP4(0.5)	Antimony	19.90	2.00	56.2	35	31.85
500-14347	JPL5-RS-AP4(0.5)	Arsenic	18.90	9.50	11.2	83	83.93
500-14347	JPL5-RS-AP4(0.5)	Cadmium	5.38	0.49	5.62	87	87.01
500-14347	JPL5-RS-AP4(0.5)	Chromium	39.60	17.00	22.5	102	100.44
500-14347	JPL5-RS-AP4(0.5)	Copper	50.90	25.00	28.1	93	92.17
500-14347	JPL5-RS-AP4(0.5)	Lead	59.60	14.00	11.2	405	407.14
500-14347	JPL5-RS-AP4(0.5)	Zinc	99.40	56.00	56.2	77	77.22
500-14347	JPL5-RS-AP4(0.5)	Thallium	4.38	0.44000	4.71	84	83.65
Groundwater Metals Samples (mg/L)							
248208	JPM3-ITF-AP51(1)	Lead	4.7594	0.05954	5	94	94.00
248233	JPM3-ITF-AF116(2)	Lead	4.4341	0.00500	5	89	88.58
248301	JPM3-ITF-AP68(1)	Lead	4.8214	0.21375	5	92	92.15
248312	JPM3-ITF-AP13(1)	Lead	4.6254	0.01393	5	93	92.23
248423	JPM3-ITF-AF160(2)	Lead	4.7168	0.15307	5	91	91.27
248537	JPM3-ITF-AP77(1)	Lead	4.7164	0.00000	5	94	94.33

SDG - sample delivery group
 mg/kg - milligram per kilogram
 mg/L - milligram per liter

Table I-5
Metals Matrix Spike Results Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 6 of 6)

Laboratory: Severn Trent

MATRIX SPIKE RESULTS VERIFICATION:

Percent Recovery (%R) = (SSC – SC)/SA x 100

Where: SSC = Spiked Sample Result
 SC = Sample Result
 SA = Spike amount added

SDG	Sample Identification	Analyte	Spiked Sample Result (mg/L)	Sample Result (mg/L)	Spike Added	Matrix Spike %R	
						Reported	Recalculated
248926	JPM3-ITF-AF173	Lead	4.6831	0.05444	5	93	92.57
249025	JPM3-ITF-AF195(2)	Lead	3.9755	0.21686	5	75	75.17
249072	JPM3-ITF-AP87(1)	Lead	4.6978	0.01551	5	94	93.64
249144	JPM3-CP7-18	Lead	4.8363	0.30597	5	91	90.61
249144	JPM3-CP7-22	Lead	4.8122	0.42436	5	88	87.76
249220	JPM4-CP4(1)	Lead	4.7486	0.18352	5	91	91.30
249239	JPM3-ITF-AP90(1)	Lead	4.5291	0.08564	5	89	88.87
249240	JPM3-ITF-AF223(2)	Lead	4.8477	0.00000	5	97	96.95
249240	JPM3-ITF-AF229(2)	Lead	4.6875	0.06457	5	92	92.46
249276	JPM3-ITF-AF231(2)	Lead	0.0973	0.00000	0.1	97	97.31
249398	JPM3-ITF-CP1-1(1)	Lead	4.9667	0.33441	5	93	92.65
249439	JPM3-ITF-AF239(2)	Lead	4.7498	0.02667	5	95	94.46
249510	JPM3-ITF-CP-1-22(.5)	Lead	15.7723	11.66284	5	82	82.19
249544	JPM12-AP1(1)	Lead	8.1883	3.20042	5	100	99.76
249576	JPM12-AF5(2)	Lead	2.4890	0.02167	5	50	49.35
249602	JPL2-ASH	Lead	96.2396	92.33140	5	78	78.16
249616	JPM12-AP31(1)	Lead	4.6495	0.00000	5	93	92.99
249623	JPM12-AP45(1)	Lead	2.1521	0.40315	5	35	34.98
249634	JPM12-AP58(1)	Lead	4.6627	0.00000	5	93	93.25
249645	JPM12-AP65(1)	Lead	4.8949	0.04609	5	98	96.98
249674	JPM12-AP72(1)	Lead	4.7699	0.04079	5	95	94.58
249743	JPM12-AP78(1)	Lead	4.7554	0.02384	5	95	94.63
249743	JPM12-AP82(1)	Lead	4.7020	0.00000	5	94	94.04
249776	JPM4-LEAD A21 DE LAGOON EXCAVATION	Lead	0.1362	0.04270	0.1	94	93.50
249777	JPM4-AP6(1)	Lead	4.9468	0.22653	5	94	94.40
249777	JPM4-AF4(2)	Lead	6.7796	2.82371	5	79	79.12
249945	JPM3-STOCKPILE-TCLP	Lead	4.5482	0.15992	5	88	87.76
249973	JPM3-ITF-AF250(3)	Lead	4.9713	0.52825	5	89	88.86
250023	JPM12-HUMP2(1)	Lead	4.7690	0.00000	5	95	95.38
250183	JPM3-ITF-AF259(2)	Lead	4.71386	0.00000	5	94	94.28
250192	JPM12-AP86(1)	Lead	2.99101	1.75992	5	25	24.62
250472	JPL23A-AP1(1)	Lead	4.53532	0.00000	5	91	90.71
250473	JPL23A-WATER	Antimony	0.67522	0.17928	0.5	99	99.19
250473	JPL23A-WATER	Barium	2.34824	0.39659	2	98	97.58
250473	JPL23A-WATER	Chromium	0.27183	0.08314	0.2	94	94.35
250473	JPL23A-WATER	Lead	1.48421	1.35797	0.1	126	126.24
250473	JPL23A-WATER	Zinc	3.50339	2.98799	0.5	103	103.08
500-4598-2	JPM4-EXCAVATION WATER	Arsenic	0.09680	0.00000	0.1	97	96.80
500-4598-2	JPM4-EXCAVATION WATER	Cadmium	0.04720	0.00000	0.05	94	94.40
500-4598-2	JPM4-EXCAVATION WATER	Copper	0.25200	0.00240	0.25	100	99.84
500-4598-2	JPM4-EXCAVATION WATER	Lead	0.11300	0.01800	0.1	95	95.00
500-4598-2	JPM4-EXCAVATION WATER	Silver	0.04280	0.00110	0.05	84	83.40
500-4598-2	JPM4-EXCAVATION WATER	Zinc	0.45700	0.00640	0.5	90	90.12
500-5122-1	JPM4-AF7(1)	Lead	87.50	82.00	5	104	110.00
500-5718-1	JPM4-SB-1-RAW-8/2	Lead	0.12600	0.03100	0.1	94	95.00
500-5974-1	JPM4-AP28(2)	Lead	4.72	0.03200	5	94	93.76
500-6111-1	JPM4-AP51(0.5)	Lead	5.34	0.99000	5	87	87.00
500-6235-1	JPL5-SP4(1)	Arsenic	5.00	0.00000	5	99	99.90
500-7162-1	JPL3-SP4(0.5)	Lead	4.64	0.04200	5	92	91.96
500-7607-1	JPL2-AF65(1)	Lead	4.47	0.07200	5	88	87.96

SDG - sample delivery group
 mg/kg - milligram per kilogram
 mg/L - milligram per liter

APPENDIX J

EXPLOSIVES SAMPLE CALCULATION VERIFICATION

Table J-1

Explosives Sample Result Calculation Verification - ug/kg

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 5)

Laboratory: Severn Trent

GC Sample Results = $(A * B * C * D) / ((E * F * G) * 1000)$

where:

A = Sample Area

B = Volume of Total Extract

C = Dilution Factor

D = Correction Factor

E = Average Calibration Factor Area

F = Sample Weight

G = Volume of Extract Injected

SDG	Analyte	Sample Identification	Sample Area	Volume of Total Extract	Average Calibration Factor Area	Volume of Extract Injected	Dilution Factor	Sample Weight	Correction Factor	Recalculated Results	Reported Results
Soil Samples (ug/kg)											
247884	Tetryl	JPM3-ITF-AF48(2)	17595	10000	97401	100	50	2.02	100	44.71	45
249144	2,4,6-TNT	JPM3-CP7-16	19609	10000	107736	100	1	2.00	100	0.91	0.91
	2,4-DNT		42980	10000	128831	100	1	2.00	100	1.67	1.7
249144	2,4,6-TNT	JPM3-CP7-21	40025	10000	107736	100	1	2.01	100	1.85	1.8
	2,4-DNT		8371	10000	128831	100	1	2.01	100	0.32	0.32
249144	2,4,6-TNT	JPM3-CP7-23	40531	10000	107736	100	1	2.01	100	1.87	1.9
	2,4-DNT		23921	10000	128831	100	1	2.01	100	0.92	0.92
249398	2,4,6-TNT	JPM3ITFCP1-7(1)	79908	10000	96173	100	1	2.01	100	4.13	4.1
	4-AM-2,6-DNT		25131	10000	59958	100	1	2.01	100	2.09	2.1
	2-AM-4,6-DNT		22820	10000	84032	100	1	2.01	100	1.35	1.4
	2,4-DNT		53704	10000	114479	100	1	2.01	100	2.33	2.3
249398	2,4,6-TNT	JPM3ITFCP1-8(1)	78080	10000	96173	100	1	2.02	100	4.02	4
	Tetryl		30312	10000	84336	100	1	2.02	100	1.78	1.8
	2,4-DNT		48363	10000	114479	100	1	2.02	100	2.09	2.1
	4-AM-2,6-DNT		7844	10000	59958	100	1	2.02	100	0.65	0.65
249398	2,4,6-TNT	JPM3ITFCP1-9(1)	35065	10000	96173	100	1	2.00	100	1.82	1.8
	Tetryl		37630	10000	84336	100	1	2.00	100	2.23	2.2
	2,4-DNT		40534	10000	114479	100	1	2.00	100	1.77	1.8
249398	2,4,6-TNT	JPM3ITFCP1-16(1)	31370	10000	96173	100	1	2.05	100	1.59	1.6
	2,4-DNT		19686	10000	114479	100	1	2.05	100	0.84	0.84
	2,6-DNT		29700	10000	60398	100	1	2.05	100	2.40	2.4
249398	2,4,6-TNT	JPM3ITFCP1-17(1)	17410	10000	96173	100	1	2.01	100	0.90	0.9
	2,4-DNT		35068	10000	114479	100	1	2.01	100	1.52	1.5
249603	2,4,6-TNT	JPL2-CP31(1)	38482	10000	112708	100	1	2.01	100	1.70	1.7
	4-AM-2,6-DNT		8799	10000	71928	100	1	2.01	100	0.61	0.61
249603	HMX	JPL2-CP41(1)	22781	10000	114183	100	1	2.04	100	0.98	0.98
	2,4,6-TNT		21536	10000	112708	100	1	2.04	100	0.94	0.94
	HMX	JPL2-CP43(1)	21228	10000	114183	100	1	2.04	100	0.91	0.91
	2,4,6-TNT		57565	10000	112708	100	1	2.04	100	2.50	2.5
	4-AM-2,6-DNT		10590	10000	71928	100	1	2.04	100	0.72	0.72
249944	2,4-DNT	JPM3-ITF-AF250(3)	15733	10000	132198	100	1	2.01	100	0.59	0.59

Table J-1

Explosives Sample Result Calculation Verification - ug/kg

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 2 of 5)

Laboratory: Severn Trent

GC Sample Results = (A * B * C * D)/((E * F * G)*1000)

where:

A = Sample Area

B = Volume of Total Extract

C = Dilution Factor

D = Correction Factor

E = Average Calibration Factor Area

F = Sample Weight

G = Volume of Extract Injected

SDG	Analyte	Sample Identification	Sample Area	Volume of Total Extract	Average Calibration Factor Area	Volume of Extract Injected	Dilution Factor	Sample Weight	Correction Factor	Recalculated Results	Reported Results
249944	2,4,6-TNT	JPM3-ITF-AF253(3)	52385	10000	112708	100	1	2.04	100	2.28	2.3
	4-AM-2,6-DNT		8015	10000	71928	100	1	2.04	100	0.55	0.55
	2,4-DNT		9082	10000	132198	100	1	2.04	100	0.34	0.34
250253	HMX	JPL2-AP36(0.5)	34945	10000	109117	100	1	2.06	100	1.55	1.6
	2,4,6-TNT		18226	10000	115253	100	1	2.06	100	0.77	0.76
	2,4-DNT		8826	10000	134242	100	1	2.06	100	0.32	0.32
250253	HMX	JPL2-AF30(1)	20260	10000	110068	100	1	2.09	100	0.88	0.91
	RDX		7210	10000	86217	100	1	2.09	100	0.40	0.4
	2,4,6-TNT		30294	10000	104151	100	1	2.09	100	1.39	1.3
	2,4-DNT		7242	10000	124171	100	1	2.09	100	0.28	0.26
	2-AM-4,6-DNT		19408	10000	90262	100	1	2.09	100	1.03	0.94
	4-AM-2,6-DNT		18160	10000	67263	100	1	2.09	100	1.29	1.2
250253	RDX	JPL2-AF31(1)	25783	10000	86217	100	1	2.00	100	1.50	1.5
	2,4,6-TNT		68550	10000	104151	100	1	2.00	100	3.29	3.0
250253	HMX	JPL2-AP47(0.5)	38568	10000	110068	100	1	2.00	100	1.75	1.8
	RDX		84119	10000	86217	100	1	2.00	100	4.88	4.9
	2,4,6-TNT		67085	10000	104151	100	1	2.00	100	3.22	2.9
	2,4-DNT		14135	10000	124171	100	1	2.00	100	0.57	0.53
250253	RDX	JPL2-AF32(1)	13549	10000	86217	100	1	2.01	100	0.78	0.78
	2,4,6-TNT		88138	10000	104151	100	1	2.01	100	4.21	3.8
250253	HMX	JPL2-CP63(2)	34906	10000	110068	100	1	2.00	100	1.59	1.6
250274	2,4,6-TNT	JPL2-CP74(0.5)	11921	10000	115253	100	1	2.03	100	0.51	0.51
250274	2,4,6-TNT	JPL2-CP75(0.5)	12662	10000	115253	100	1	2.02	100	0.54	0.54
250274	2,4,6-TNT	JPL2-CP76(0.5)	7710	10000	115253	100	1	2.01	100	0.33	0.33
250274	2,4,6-TNT	JPL2-CP77(0.5)	60511	10000	115253	100	1	2.01	100	2.61	2.6
250285	RDX	JPL2-AF38(2)	10116	10000	87438	100	1	2.01	100	0.58	0.59
	2,4,6-TNT		10635	10000	115253	100	1	2.01	100	0.46	0.46
250285	HMX	JPL2-AP62(0.5)	32557	10000	109117	100	1	2.01	100	1.48	1.5
	2,4,6-TNT		56142	10000	115253	100	1	2.01	100	2.42	2.4
250285	HMX	JPL2-AF39(2)	42539	10000	109117	100	1	2.03	100	1.92	2
250285	HMX	JPL2-AP66(0.5)	13015	10000	109117	100	1	2.01	100	0.59	0.6
	1,3,5-TNB		9101	10000	176986	100	1	2.02	100	0.25	0.25
	2,4,6-TNT		18633	10000	115253	100	1	2.02	100	0.80	0.8

Table J-1

Explosives Sample Result Calculation Verification - ug/kg

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 3 of 5)

Laboratory: Severn TrentGC Sample Results = $(A * B * C * D) / ((E * F * G) * 1000)$

where:

A = Sample Area

B = Volume of Total Extract

C = Dilution Factor

D = Correction Factor

E = Average Calibration Factor Area

F = Sample Weight

G = Volume of Extract Injected

SDG	Analyte	Sample Identification	Sample Area	Volume of Total Extract	Average Calibration Factor Area	Volume of Extract Injected	Dilution Factor	Sample Weight	Correction Factor	Recalculated Results	Reported Results
250293	HMX	JPL2-AP73-D(0.5)	24458	10000	123748	100	1	2.02	100	0.98	0.98
	2,4,6-TNT		17019	10000	122650	100	1	2.02	100	0.69	0.69
250293	HMX	JPL2-AP74-D(0.5)	28909	10000	123748	100	1	2.01	100	1.16	1.2
	2,4,6-TNT		19365	10000	122650	100	1	2.01	100	0.79	0.79
250332	RDX	JPL2-AF41(2)	39521	10000	85921	100	1	2.02	100	2.28	2.3
	1,3,5-TNB		14368	10000	178025	100	1	2.02	100	0.40	0.4
	2,4,6-TNT		107708	10000	115754	100	1	2.02	100	4.61	4.6
250332	HMX	JPL2-AP79(0.5)	15985	10000	106937	100	1	2.02	100	0.74	0.74
	RDX		5687	10000	106937	100	1	2.02	100	0.26	0.33
	1,3,5-TNB		23911	10000	178025	100	1	2.02	100	0.66	0.66
	2,4,6-TNT		95490	10000	115754	100	1	2.02	100	4.08	4.1
	2-AM-4,6-DNT		28333	10000	98306	100	1	2.02	100	1.43	1.4
	4-AM-2,6-DNT		50423	10000	70477	100	1	2.02	100	3.54	3.5
250332	HMX	JPL2-AP82(0.5)	23631	10000	106937	100	1	2.03	100	1.09	1.1
	2,4,6-TNT		61352	10000	115754	100	1	2.03	100	2.61	2.6
	2-AM-4,6-DNT		13455	10000	98306	100	1	2.03	100	0.67	0.68
	4-AM-2,6-DNT		13282	10000	70477	100	1	2.03	100	0.93	0.93
250332	HMX	JPL2-AF42(2)	26379	10000	106937	100	1	2.05	100	1.20	1.2
	2,4,6-TNT		49240	10000	115754	100	1	2.05	100	2.08	2.1
250332	HMX	JPL2-AF43(2)	177569	10000	106937	100	1	2.05	100	8.10	7.9
250340	HMX	JPL2-AP91(0.5)	31286	10000	106937	100	1	2.01	100	1.46	1.5
	RDX		74433	10000	85921	100	1	2.01	100	4.31	4.3
	2,4,6-TNT		75032	10000	115754	100	1	2.01	100	3.22	3.2
250340	HMX	JPL2-AP93(0.5)	18103	10000	106937	100	1	2.04	100	0.83	0.3
	RDX		27362	10000	85921	100	1	2.04	100	1.56	1.6
	2,4,6-TNT		15747	10000	115754	100	1	2.04	100	0.67	0.67
	4-AM-2,6-DNT		9974	10000	70477	100	1	2.04	100	0.69	0.69
250224	HMX	JPM3-ITF-AF49B(1)	45328	10000	107194	100	1	2.01	100	2.10	2.1
	2,4,6-TNT		14870	10000	107983	100	1	2.01	100	0.69	0.69
	2-AM-4,6-DNT		17519	10000	93246	100	1	2.01	100	0.93	0.93
	4-AM-2,6-DNT		7650	10000	66822	100	1	2.01	100	0.57	0.57
250224	2,4,6-TNT	JPM3-ITF-AF227B(1)	22949	10000	107983	100	1	2.04	100	1.04	1
500-4599	HMX	JPWR367-2W-2	21429	10000	102354	100	1	2.01	100	1.04	1
	RDX		21283	10000	77460	100	1	2.01	100	1.37	1.4
	1,3,5-TNB		8981	10000	169246	100	1	2.01	100	0.26	0.26
	2,4,6-TNT		65151	10000	111513	100	1	2.01	100	2.91	2.9
	2-AM-4,6-DNT		38985	10000	90763	100	1	2.01	100	2.14	2.1
	4-AM-2,6-DNT		32328	10000	64749	100	1	2.01	100	2.48	2.5

Table J-1

Explosives Sample Result Calculation Verification - ug/kg

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 4 of 5)

Laboratory: Severn Trent

GC Sample Results = $(A * B * C * D) / ((E * F * G) * 1000)$

where:

A = Sample Area

B = Volume of Total Extract

C = Dilution Factor

D = Correction Factor

E = Average Calibration Factor Area

F = Sample Weight

G = Volume of Extract Injected

SDG	Analyte	Sample Identification	Sample Area	Volume of Total Extract	Average Calibration Factor Area	Volume of Extract Injected	Dilution Factor	Sample Weight	Correction Factor	Recalculated Results	Reported Results
500-4599	HMX	JPWR367-2W-12	21923	10000	102354	100	1	2.02	100	1.06	1.1
	RDX		48209	10000	77460	100	1	2.02	100	3.08	3.1
	2,4,6-TNT		44071	10000	111513	100	1	2.02	100	1.96	2.0
	2-AM-4,6-DNT		24470	10000	90763	100	1	2.02	100	1.33	1.3
	4-AM-2,6-DNT		24276	10000	64749	100	1	2.02	100	1.86	1.9
500-4599	HMX	JPWR367-2W-14	23086	10000	102354	100	1	2.00	100	1.13	1.1
	RDX		17434	10000	77460	100	1	2.00	100	1.13	1.1
	2,4,6-TNT		14240	10000	111513	100	1	2.00	100	0.64	0.64
	4-AM-2,6-DNT		7184	10000	64749	100	1	2.00	100	0.55	0.55
500-4599	HMX	JPWR367-2W-4-D	34849	10000	102354	100	1	2.01	100	1.69	1.7
	RDX		11740	10000	77460	100	1	2.01	100	0.75	0.75
	2,4,6-TNT		47660	10000	111513	100	1	2.01	100	2.13	2.1
	2-AM-4,6-DNT		22714	10000	90763	100	1	2.01	100	1.25	1.2
	4-AM-2,6-DNT		26777	10000	64749	100	1	2.01	100	2.06	2.1
500-4599	HMX	JPWR367-2W-8-D	41073	10000	102354	100	1	2.04	100	1.97	2.0
	RDX		18814	10000	77460	100	1	2.04	100	1.19	1.2
	2,4,6-TNT		23152	10000	111513	100	1	2.04	100	1.02	1.0
	2-AM-4,6-DNT		16001	10000	90763	100	1	2.04	100	0.86	0.86
	4-AM-2,6-DNT		13309	10000	64749	100	1	2.04	100	1.01	1.0
500-4602	HMX	JPWR368-2E-3	30248	10000	120956	100	1	2.01	100	1.24	1.2
	RDX		11423	10000	96073	100	1	2.01	100	0.59	0.59
	1,3,5-TNB		10991	10000	190837	100	1	2.01	100	0.29	0.29
	2,4,6-TNT		81677	10000	119912	100	1	2.01	100	3.39	3.4
	2-AM-4,6-DNT		44094	10000	101380	100	1	2.01	100	2.16	2.2
	4-AM-2,6-DNT		40521	10000	75774	100	1	2.01	100	2.66	2.7
500-4602	HMX	JPWR368-2E-4	18156	10000	120956	100	1	2.01	100	0.75	0.75
	RDX		37269	10000	96073	100	1	2.01	100	1.93	1.9
	1,3,5-TNB		17388	10000	190837	100	1	2.01	100	0.45	0.45
	2,4,6-TNT		57373	10000	119912	100	1	2.01	100	2.38	2.4
	2-AM-4,6-DNT		40569	10000	101380	100	1	2.01	100	1.99	2
	4-AM-2,6-DNT		88468	10000	75774	100	1	2.01	100	5.81	5.8
500-4602	RDX	JPWR368-2E-6	4822	10000	96073	100	1	2.02	100	0.25	0.25
	2,4,6-TNT		8855	10000	119912	100	1	2.02	100	0.37	0.37
500-4602	2-AM-4,6-DNT	JPWR368-2E-7	22446	10000	101380	100	1	2.01	100	1.10	1.1
	4-AM-2,6-DNT		13877	10000	75774	100	1	2.01	100	0.91	0.91
500-4661	2,4,6-TNT	JPWR-369-1W-1	7983	10000	119912	100	1	2.00	100	0.33	0.33

Table J-1

Explosives Sample Result Calculation Verification - ug/kg

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 5 of 5)

Laboratory: Severn TrentGC Sample Results = $(A * B * C * D) / ((E * F * G) * 1000)$

where:

A = Sample Area

B = Volume of Total Extract

C = Dilution Factor

D = Correction Factor

E = Average Calibration Factor Area

F = Sample Weight

G = Volume of Extract Injected

SDG	Analyte	Sample Identification	Sample Area	Volume of Total Extract	Average Calibration Factor Area	Volume of Extract Injected	Dilution Factor	Sample Weight	Correction Factor	Recalculated Results	Reported Results
500-4661	2,4,6-TNT	JPWR-369-1W-2	18646	10000	119912	100	1	2.03	100	0.77	0.77
	2-AM-4,6-DNT		11309	10000	101380	100	1	2.03	100	0.55	0.55
	4-AM-2,6-DNT		9742	10000	75774	100	1	2.03	100	0.63	0.63
500-4661	RDX	JPWR-369-1W-3	9886	10000	96073	100	1	2.03	100	0.51	0.51
	2,4,6-TNT		49174	10000	119912	100	1	2.03	100	2.02	2.0
	4-AM-2,6-DNT		7583	10000	75774	100	1	2.03	100	0.49	0.49
500-4661	RDX	JPWR-369-1W-5	10099	10000	96073	100	1	2.00	100	0.53	0.53
	2,4,6-TNT		10045	10000	119912	100	1	2.00	100	0.42	0.42
500-4661	RDX	JPWR-369-1W-7	13172	10000	96073	100	1	2.00	100	0.69	0.69
500-4661	2,4,6-TNT	JPWR-369-1W-8	22103	10000	119912	100	1	2.01	100	0.92	0.92
	2-AM-4,6-DNT		45473	10000	101380	100	1	2.01	100	2.23	2.2
	4-AM-2,6-DNT		75300	10000	75774	100	1	2.01	100	4.94	4.9
500-4661	2,4,6-TNT	JPWR-369-1W-10	9185	10000	119912	100	1	2.01	100	0.38	0.38
	2-AM-4,6-DNT		12232	10000	101380	100	1	2.01	100	0.60	0.6
500-4662	RDX	JPWR370-1E-2	4862	10000	77460	100	1	2.01	100	0.31	0.31
	2,4,6-TNT		6033	10000	111513	100	1	2.10	100	0.26	0.27
500-4662	2,4,6-TNT	JPWR370-1E-9	10442	10000	111513	100	1	2.03	100	0.46	0.46
500-4662	RDX	JPWR370-1E-11	33594	10000	77460	100	1	2.02	100	2.15	2.1
	2,4,6-TNT		63936	10000	111513	100	1	2.02	100	2.84	2.8
	2-AM-4,6-DNT		16098	10000	90763	100	1	2.02	100	0.88	0.88
	4-AM-2,6-DNT		14221	10000	64749	100	1	2.02	100	1.09	1.1
500-4662	RDX	JPWR370-1E-12	4950	10000	77460	100	1	2.01	100	0.32	0.32
500-4662	2,4,6-TNT	JPWR370-1E-13-D	11471	10000	111513	100	1	2.01	100	0.51	0.51
500-5635	2-AM-4,6-DNT	JPL3-GENFILL	9194	10000	90763	100	1	2.02	100	0.50	0.5
	2,4,6-TNT		7992	10000	111513	100	1	2.02	100	0.35	0.35
500-5681	2,4,6-TNT	JPL3-Blast Pit (2)	7597	10000	133520	100	1	2.00	100	0.28	0.28
500-5719	RDX	JPL3-STOCKPILE-1(0)	4199	10000	77460	100	1	2.01	100	0.27	0.27
	2,4,6-TNT		9699	10000	111513	100	1	2.01	100	0.43	0.43
500-5720	2,4,6-TNT	JPM4-Sediment-8/2	14341	10000	111513	100	1	2.02	100	0.64	0.64
500-6713	RDX	JPL3-Concrete	6414	10000	84246	100	1	2.05	100	0.37	0.37
500-6650	2-AM-4,6-DNT	JPL3-AP25(0.5)	13880	10000	91657	100	1	2.01	100	0.75	0.75
	4-AM-2,6-DNT		9254	10000	66542	100	1	2.01	100	0.69	0.69
	2,4,6-TNT		7248	10000	107882	100	1	2.01	100	0.33	0.33
500-6650	RDX	JPL3-AP26(0.5)	15146	10000	84246	100	1	2.06	100	0.87	0.87
500-6900	HMX	JPL2-CP96(0.5)	6314	10000	108746	100	1	2.01	100	0.29	0.6
	RDX		3980	10000	87487	100	1	2.01	100	0.23	0.3
	2,4,6-TNT		12257	10000	115641	100	1	2.01	100	0.53	0.69
500-6900	2,4,6-TNT	JPL2-CP98(0.5)	11113	10000	115641	100	1	2.01	100	0.48	0.48
500-7047	2,4,6-TNT	JPL3-SP4(0.5)	5800	10000	115641	100	1	2.01	100	0.25	0.25

Table J-2

Explosives Sample Result Calculation Verification - ug/L

Joliet Army Ammunition Plant - SRU2 and SRU3 LAP

(Page 1 of 1)

Laboratory: Severn TrentGC/MS Sample Results = $(A * B * C)/(D * E * F * G/100)$

where:

A = Sample Area

B = Internal Standard Concentration

C = Volume Purged

D = Internal Standard Area

E = Initial Calibration Response Factor

F = Sample Weight

G = Percent Solid

SDG	Analyte	Sample Identification	Sample Area	Volume of Extract	Dilution Factor	Average Calibration Factor Area	Volume Injected	Volume of Sample Extracted	Recalculated Results	Reported Results
Water Samples (ug/L)										
249477	TCLP 2,4-DNT	JPM3-ITF-CP1-18(1)	8843	6000	1	132198	1	770	0.52	
249776	RDX	JPM3-LEAD A 21 DE LAGOON EXCA	21898	6000	1	92457	1	770	1.85	1.8
	2-AM-4,6-DNT		10438	6000	1	98102	1	770	0.83	0.83
	4-AM-2,6-DNT		20034	6000	1	71691	1	770	2.18	2.2
500-5718	HMX	JPM4-SB-1-RAW-8/2	51343	6200	1	102354	1	770	4.04	4
	RDX		59228	6200	1	77460	1	770	6.16	6.2
500-6089	4-AM-2,6-DNT	JPL3-Stormwater-US#6	18277	8100	1	66542	1	770	2.89	2.9
	2,4-DNT		76654	8100	1	128155	1	770	6.29	6.3
	2,4,6-TNT		49375	8100	1	107882	1	770	4.81	4.8
500-6089	4-AM-2,6-DNT	JPL3-Stormwater-DS#6	22772	6000	1	66542	1	770	2.67	2.7
	2,4-DNT		40502	6000	1	128155	1	770	2.46	2.5
	2,4,6-TNT		13472	6000	1	107882	1	770	0.97	0.97

ug/L - micrograms per liter
SDG - sample delivery group
DNT - dinitrotoluene

APPENDIX K

**POLYNUCLEAR AROMATIC HYDROCARBONS AND POLYCHLORINATED
NAPHTHALENE SAMPLE CALCULATION VERIFICATION**

Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 14)

Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

A = Sample Area

B = Internal Standard Concentration

C = Volume Purged

D = Internal Standard Area

E = Initial Calibration Response Factor

F = Sample Weight

SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
Samples (ug/kg)															
247700	Phenanthrene	JPM3-ITF-AF4	314436	8	779247	1.181	1	500	16	80			109.221	110	
	Anthracene		88778	8	779247	1.114	1	500	16	80			32.694	33	
	Fluoranthene		1140858	8	779247	1.233	1	500	16	80			378.606	380	
	Pyrene		1010413	8	539233	1.424	1	500	16	80			420.731	420	
	Benzo (a) anthracene		512904	8	539233	1.325	1	500	16	80	0.03392	1.32509	292.9352013	240	
	Chrysene		654910	8	539233	1.252	1	500	16	80			310.220	310	
	Benzo (b) fluoranthene		899608	8	539233	1.843	1	500	16	80			289.423	290	
	Benzo (k) fluoranthene		276423	8	539233	1.866	1	500	16	80			87.816	88	
	Benzo (a) pyrene		525403	8	539233	1.640	1	500	16	80			189.984	190	
	Indeno (1,2,3-cd) pyrene		441497	8	540286	1.896	1	500	16	80			137.776	140	
	Dibenzo (a,h) anthracene		152626	8	540286	1.514	1	500	16	80			59.646	60	
	Benzo (g,h,i) perylene		428675	8	540286	1.586	1	500	16	80			159.956	160	
247700	Phenanthrene	JPM3-ITF-AF5	61146	8	752521	1.181	5	500	16	82			106.129	110	
	Fluoranthene		165964	8	752521	1.233	5	500	16	82			275.936	280	
	Pyrene		152065	8	675886	1.424	5	500	16	82			243.767	240	
	Benzo (a) anthracene		102335	8	675886	1.325	5	500	16	82	0.03392	1.32509	56.75283317	230	
	Chrysene		148186	8	675886	1.252	5	500	16	82			270.231	270	
	Benzo (b) fluoranthene		216499	8	750947	1.843	5	500	16	82			241.346	240	
	Benzo (k) fluoranthene		122106	8	750947	1.866	5	500	16	82			134.412	130	
	Benzo (a) pyrene		130168	8	750947	1.640	5	500	16	82			163.092	160	
	Indeno (1,2,3-cd) pyrene		142152	8	750947	1.896	5	500	16	82			154.010	150	
	Benzo (g,h,i) perylene		139580	8	750947	1.586	5	500	16	82			180.820	180	
247700	Benzo (b) fluoranthene	JPM3-ITF-AF6	42353	8	601503	1.843	1	500	15	85			11.693	12	
	Benzo (a) pyrene		23998	8	601503	1.640	1	500	15	85			7.446	8	
	Indeno (1,2,3-cd) pyrene		30305	8	601503	1.896	1	500	15	85			8.131	8.6	
	Benzo (g,h,i) perylene		30104	8	601503	1.586	1	500	15	85			9.658	10.0	
247748	Fluoranthene	JPM3-ITF-AP8(1)	83302	8	733099	1.288	1	500	15	80			28.573	29	
	Pyrene		72881	8	733099	1.2787	1	500	15	80			25.190	17	
	Chrysene		87506	8	953604	1.20204	1	500	15	80			24.734	23	
247748	Naphthalene	JPM3-ITF-AP9(1)	279784	8	1089218	0.99874	1	500	16	86			77.293	74	
	Acenaphthylene		277128	8	639386	1.95	1	500	16	86			66.707	68	
	Acenaphthene		461528	8	639386	1.08	1	500	16	86			201.456	200	
	Fluorene		709798	8	639386	1.25	1	500	16	86			266.610	240	
	Phenanthrene		10040627	8	639386	2.14	1	500	16	86			2209.430	2200	
	Anthracene		1955158	8	1071662	1.12	1	500	16	86			488.900	510	
	Fluoranthene		16651175	8	1071662	1.288	1	500	16	86			3624.013	4800	
	Pyrene		13940878	8	1071662	1.2787	1	500	16	86			3057.366	4100	
	Benzo (a) anthracene		8885922	8	1071662	1.24	1	500	16	86			2005.963	2100	
	Chrysene		8745828	8	1071662	1.20	1	500	16	86			2040.365	2300	
	Benzo (b) fluoranthene		11849234	8	1071662	1.69	1	500	16	86			1971.235	1800	
	Benzo (k) fluoranthene		4114037	8	922435	1.98	1	500	16	86			678.264	920	
	Benzo (a) pyrene		7097922	8	922435	1.69	1	500	16	86			1371.549	1400	
	Indeno (1,2,3-cd) pyrene		1107494	8	922435	1.94	1	500	16	86			186.201	1100	
	Dibenzo (a,h) anthracene		2537229	8	922435	1.51	1	500	16	86			546.589	520	
	Benzo (g,h,i) perylene		332303	8	922435	1.72	1	500	16	86			62.799	1100	
247748	Phenanthrene	JPM3-ITF-AF11(1)	107832	8	981540	2.14	1	500	15	92			14.698	25	
	Fluoranthene		238594	8	981540	1.29	1	500	15	92			53.914	54	
	Pyrene		193601	8	981540	1.2787	1	500	15	92			44.082	50	
	Benzo (a) anthracene		132666	8	981540	1.24	1	500	15	92			31.094	35	
	Chrysene		170108	8	770864	1.20	1	500	15	92			52.464	49	

SDG - sample delivery group
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PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene

Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

A = Sample Area

B = Internal Standard Concentration

C = Volume Purged

D = Internal Standard Area

E = Initial Calibration Response Factor

F = Sample Weight

SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
	Benzo (b) fluoranthene		269594	8	770864	1.69	1	500	15	92			59.291		50
	Benzo (k) fluoranthene		183016	8	728219	1.98	1	500	15	92			36.345		43
	Benzo (a) pyrene		162714	8	728219	1.69	1	500	15	92			37.873		40
	Indeno (1,2,3-cd) pyrene		154766	8	728219	1.94	1	500	15	92			31.343		31
	Dibenzo (a,h) anthracene		67390	8	728219	1.51	1	500	15	92			17.487		17
	Benzo (g,h,i) perylene		149842	8	728219	1.72	1	500	15	92			34.109		36
247748	Naphthalene	JPM3-ITF-AF13(2)	63332	8	1157653	1.00	1	500	16	79			17.998		17
	Fluoranthene		85509	8	1172800	1.29	1	500	16	79			18.593		19
	Pyrene		79937	8	1172800	1.2787	1	500	16	79			17.514		16
247836	Naphthalene	JPM3-ITF-AP16(1)	19057	8	226135	1.04	1	500	15.19	87	NA	NA	24.692		21J
	Phenanthrene		32553	8	226135	1.22	1	500	15.19	87	NA	NA	35.982		36J
	Fluoranthene		36647	8	226135	1.32	1	500	15.19	87	NA	NA	37.443		37J
	Pyrene		32879	8	211391	1.43	1	500	15.19	87	NA	NA	33.067		35J
247836	Phenanthrene	JPM3-ITF-AF39(2)	38677	8	390779	1.22	1	500	15.87	84	NA	NA	24.538		25J
	Fluoranthene		85771	8	390779	1.32	1	500	15.87	84	NA	NA	50.299		50
	Pyrene		72472	8	374217	1.43	1	500	15.87	84	NA	NA	40.837		41
	Benzo (a) anthracene		43267	8	374217	1.42	1	500	15.87	84	NA	NA	24.630		25J
	Chrysene		51212	8	374217	1.32	1	500	15.87	84	NA	NA	31.361		31J
	Benzo (b) fluoranthene		51151	8	336338	1.64	1	500	15.87	84	NA	NA	28.061		28J
	Benzo (k) fluoranthene		57463	8	336338	1.51	1	500	15.87	84	NA	NA	34.264		34J
	Benzo (a) pyrene		40383	8	336338	1.29	1	500	15.87	84	NA	NA	28.177		28J
	Indeno (1,2,3-cd) pyrene		37402	8	336338	1.50	1	500	15.87	84	NA	NA	22.411		22J
	Benzo (g,h,i) perylene		34001	8	336338	1.16	1	500	15.87	84	NA	NA	26.255		26J
247811	Fluoranthene	JPM3-ITF-AP13(1)	57326	8	512856	1.32	1	500	15.87	84	NA	NA	25.390		25J
	Pyrene		42224	8	512856	1.43	1	500	15.87	84	NA	NA	17.208		17J
	Chrysene		44761	8	528529	1.32	1	500	15.87	84	NA	NA	19.237		19J
247811	Fluoranthene	JPM3-ITF-AP14(1)	38754	8	380519	1.32	1	500	15.05	84	NA	NA	24.399		24J
	Pyrene		32034	8	380519	1.43	1	500	15.05	84	NA	NA	18.558		19J
	Chrysene		30689	8	380567	1.32	1	500	15.05	84	NA	NA	19.319		19J
247811	Acenaphthene	JPM3-ITF-AF30(2)	13887	8	234566	1.03	1	500	15.24	78	NA	NA	19.362		19J
	Fluorene		27073	8	234566	1.29	1	500	15.24	78	NA	NA	30.132		30J
	Phenanthrene		718873	8	427041	1.22	1	500	15.24	78	NA	NA	463.835		460
	Anthracene		249429	8	427041	1.15	1	500	15.24	78	NA	NA	171.120		170
	Fluoranthene		5174070	8	427041	1.32	1	500	15.24	78	NA	NA	3085.857		3100
	Pyrene		4652408	8	427041	1.43	1	500	15.24	78	NA	NA	2553.209		2600
	Benzo (a) anthracene		3011385	8	427041	1.42	1	500	15.24	78	NA	NA	1669.509		1700
	Chrysene		2884602	8	399348	1.32	1	500	15.24	78	NA	NA	1839.674		1800
	Benzo (b) fluoranthene		3920126	8	399348	1.64	1	500	15.24	78	NA	NA	2012.984		2000
	Benzo (k) fluoranthene		2213491	8	399348	1.51	1	500	15.24	78	NA	NA	1235.442		1200
	Benzo (a) pyrene		1980572	8	399348	1.29	1	500	15.24	78	NA	NA	1293.516		1500
	Indeno (1,2,3-cd) pyrene		310018	8	399348	1.50	1	500	15.24	78	NA	NA	173.875		1000
	Dibenzo (a,h) anthracene		288483	8	399348	1.25	1	500	15.24	78	NA	NA	194.046		520
	Benzo (g,h,i) perylene		84027	8	399349	1.16	1	500	15.24	78	NA	NA	60.735		1100
247811	Fluoranthene	JPM3-ITF-AF31(2)	43205	8	432241	1.32	1	500	15.42	81	NA	NA	24.322		24J
	Pyrene		37482	8	432241	1.43	1	500	15.42	81	NA	NA	19.416		19J
	Benzo (a) anthracene		34230	8	432241	1.42	1	500	15.42	81	NA	NA	17.913		18J
	Chrysene		42894	8	432241	1.32	1	500	15.42	81	NA	NA	24.147		24J
	Benzo (b) fluoranthene		47778	8	391352	1.64	1	500	15.42	81	NA	NA	23.919		24J
	Benzo (k) fluoranthene		38053	8	391352	1.51	1	500	15.42	81	NA	NA	20.706		21J
	Benzo (a) pyrene		27392	8	391352	1.29	1	500	15.42	81	NA	NA	17.441		17J
247811	Fluoranthene	JPM3-ITF-AF35(2)	29183	8	382762	1.32	1	500	15.12	78	NA	NA	19.532		20J
	Pyrene		27495	8	331651	1.43	1	500	15.12	78	NA	NA	19.543		20J

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Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 3 of 14)

Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

A = Sample Area

B = Internal Standard Concentration

C = Volume Purged

D = Internal Standard Area

E = Initial Calibration Response Factor

F = Sample Weight

SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
	Benzo (a) anthracene		26680	8	331621	1.42	1	500	15.12	78	NA	NA	19.159		19 J
	Chrysene		33366	8	331651	1.32	1	500	15.12	78	NA	NA	25.773		26 J
	Benzo (b) fluoranthene		64410	8	303376	1.64	1	500	15.12	78	NA	NA	43.792		44
	Benzo (k) fluoranthene		50894	8	303376	1.51	1	500	15.12	78	NA	NA	37.611		38 J
	Benzo (a) pyrene		37538	8	303376	1.29	1	500	15.12	78	NA	NA	32.461		36 J
	Indeno (1,2,3-cd) pyrene		37819	8	303376	1.50	1	500	15.12	78	NA	NA	28.084		28 J
	Dibenzo (a,h) anthracene		15886	8	303376	1.25	1	500	15.12	78	NA	NA	14.148		14 J
	Benzo (g,h,i) perylene		31450	8	330376	1.16	1	500	15.12	78	NA	NA	27.639		30 J
247811	Phenanthrene	JPM3-ITF-AP13(1)D	25664	8	475436	1.22	1	500	15.38	84	NA	NA	13.786		14 J
	Fluoranthene		57157	8	475436	1.32	1	500	15.38	84	NA	NA	28.379		28 J
	Pyrene		41601	8	428822	1.43	1	500	15.38	84	NA	NA	21.072		21 J
	Benzo (a) anthracene		23388	8	428822	1.42	1	500	15.38	84	NA	NA	11.968		12 J
	Chrysene		23739	8	428822	1.32	1	500	15.38	84	NA	NA	13.068		22 J
	Benzo (b) fluoranthene		41353	8	356850	1.64	1	500	15.38	84	NA	NA	22.025		22 J
	Benzo (k) fluoranthene		25634	8	356850	1.51	1	500	15.38	84	NA	NA	14.840		15 J
	Benzo (a) pyrene		23102	8	356850	1.29	1	500	15.38	84	NA	NA	15.650		15 J
	Indeno (1,2,3-cd) pyrene		19321	8	356850	1.50	1	500	15.38	84	NA	NA	11.240		11 J
	Benzo (g,h,i) perylene		19602	8	356850	1.16	1	500	15.38	84	NA	NA	14.696		15 J
247884	Indeno (1,2,3-cd) pyrene	JPM3-ITF-AP23(1)	39717	8	325080	1.50	1	500	15.30	79	NA	NA	27.130		27 J
	Dibenzo (a,h) anthracene		29272	8	325080	1.25	1	500	15.30	79	NA	NA	23.981		24 J
	Benzo (g,h,i) perylene		38110	8	325080	1.16	1	500	15.30	79	NA	NA	33.549		34 J
247884	Pyrene	JPM3-ITF-AP24(1)	24201	8	462599	1.43	1	500	15.27	82	NA	NA	11.618		12 J
247884	Benzo (b) fluoranthene	JPM3-ITF-AF49(2)	54485	8	471077	1.64	1	500	15.38	78	NA	NA	23.471		23 J
	Benzo (k) fluoranthene		48951	8	471077	1.51	1	500	15.38	78	NA	NA	22.920		23 J
247884	Acenaphthylene	JPM3-ITF-AF54(2)	44962	8	371807	1.85	1	500	15.69	77	NA	NA	21.605		22 J
	Phenanthrene		58926	8	613095	1.22	1	500	15.69	77	NA	NA	26.020		26 J
	Anthracene		53618	8	613095	1.15	1	500	15.69	77	NA	NA	25.174		25 J
	Fluoranthene		218602	8	613095	1.32	1	500	15.69	77	NA	NA	89.225		89
	Pyrene		214450	8	613095	1.43	1	500	15.69	77	NA	NA	80.542		76
	Benzo (a) anthracene		164537	8	613095	1.42	1	500	15.69	77	NA	NA	62.427		59
	Chrysene		212670	8	650056	1.32	1	500	15.69	77	NA	NA	81.867		82
	Benzo (b) fluoranthene		315236	8	650056	1.64	1	500	15.69	77	NA	NA	97.707		99
	Benzo (k) fluoranthene		302129	8	642457	1.51	1	500	15.69	77	NA	NA	102.989		100
	Benzo (a) pyrene		210694	8	642457	1.29	1	500	15.69	77	NA	NA	84.040		84
	Indeno (1,2,3-cd) pyrene		201335	8	642457	1.50	1	500	15.69	77	NA	NA	68.964		69
	Dibenzo (a,h) anthracene		82327	8	642457	1.25	1	500	15.69	77	NA	NA	33.821		34 J
	Benzo (g,h,i) perylene		178617	8	642457	1.16	1	500	15.69	77	NA	NA	78.849		79
247954	Phenanthrene	JPM3-ITF-AP32(1)	25181	8	693004	1.22	1	500	15.09	81	NA	NA	9.823		9.9 J
	Fluoranthene		28605	8	693004	1.32	1	500	15.09	81	NA	NA	10.314		10 J
	Chrysene		34238	8	693004	1.32	1	500	15.09	81	NA	NA	12.345		12 J
	Benzo (b) fluoranthene		37380	8	727469	1.64	1	500	15.09	81	NA	NA	10.338		10 J
247954	Phenanthrene	JPM3-ITF-AP33(1)	66677	8	717166	1.22	1	500	15.21	79	NA	NA	25.543		26 J
	Fluoranthene		161254	8	766198	1.32	1	500	15.21	79	NA	NA	53.447		57
	Pyrene		131873	8	766198	1.43	1	500	15.21	79	NA	NA	40.219		40 J
	Benzo (a) anthracene		81910	8	766198	1.42	1	500	15.21	79	NA	NA	25.236		25 J
	Chrysene		126193	8	655981	1.32	1	500	15.21	79	NA	NA	48.853		42
	Benzo (b) fluoranthene		166915	8	655981	1.64	1	500	15.21	79	NA	NA	52.027		52
	Benzo (k) fluoranthene		87041	8	655981	1.51	1	500	15.21	79	NA	NA	29.489		29 J
	Benzo (a) pyrene		82279	8	655981	1.29	1	500	15.21	79	NA	NA	32.619		33 J
	Indeno (1,2,3-cd) pyrene		73050	8	655981	1.50	1	500	15.21	79	NA	NA	24.869		25 J
	Dibenzo (a,h) anthracene		27094	8	655981	1.25	1	500	15.21	79	NA	NA	11.063		11 J
	Benzo (g,h,i) perylene		60457	8	655981	1.16	1	500	15.21	79	NA	NA	26.525		26 J

Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 4 of 14)

Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

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SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
247954	Phenanthrene	JPM3-ITF-AP34(1)	175055	8	609413	1.22	1	500	15.26	83	NA	NA	74.570	75	
	Anthracene		39756	8	609413	1.15	1	500	15.26	83	NA	NA	18.007	18	J
	Fluoranthene		380327	8	609413	1.32	1	500	15.26	83	NA	NA	149.755	150	
	Pyrene		343548	8	609413	1.43	1	500	15.26	83	NA	NA	124.473	120	
	Benzo (a) anthracene		176323	8	607170	1.42	1	500	15.26	83	NA	NA	64.776	65	
	Chrysene		192638	8	605347	1.32	1	500	15.26	83	NA	NA	76.360	76	
	Benzo (b) fluoranthene		229188	8	605347	1.64	1	500	15.26	83	NA	NA	73.148	73	
	Benzo (k) fluoranthene		183771	8	605347	1.51	1	500	15.26	83	NA	NA	63.752	64	
	Benzo (a) pyrene		178160	8	605347	1.29	1	500	15.26	83	NA	NA	72.320	72	
	Indeno (1,2,3-cd) pyrene		145598	8	605347	1.50	1	500	15.26	83	NA	NA	50.755	51	
	Dibenzo (a,h) anthracene		53498	8	605347	1.25	1	500	15.26	83	NA	NA	22.366	22	J
	Benzo (g,h,l) perylene		110081	8	605347	1.16	1	500	15.26	83	NA	NA	49.454	49	
247954	Phenanthrene	JPM3-ITF-AP35(1)	182581	8	743315	1.22	1	500	15.37	88	NA	NA	59.844	60	
	Anthracene		45345	8	743315	1.15	1	500	15.37	88	NA	NA	15.803	16	J
	Fluoranthene		520758	8	628155	1.32	1	500	15.37	88	NA	NA	186.698	160	
	Pyrene		468826	8	628155	1.43	1	500	15.37	88	NA	NA	154.661	150	
	Benzo (a) anthracene		231496	8	628155	1.42	1	500	15.37	88	NA	NA	77.148	77	
	Chrysene		256674	8	627557	1.32	1	500	15.37	88	NA	NA	92.107	92	
	Benzo (b) fluoranthene		3662149	8	627557	1.64	1	500	15.37	88	NA	NA	1058.115	100	
	Benzo (k) fluoranthene		261541	8	627557	1.51	1	500	15.37	88	NA	NA	82.137	82	
	Benzo (a) pyrene		282601	8	627557	1.29	1	500	15.37	88	NA	NA	103.851	100	
	Indeno (1,2,3-cd) pyrene		229541	8	627557	1.50	1	500	15.37	88	NA	NA	72.438	72	
	Dibenzo (a,h) anthracene		84934	8	627557	1.25	1	500	15.37	88	NA	NA	32.146	32	J
	Benzo (g,h,l) perylene		219363	8	627557	1.16	1	500	15.37	88	NA	NA	89.215	89	
247954	Phenanthrene	JPM3-ITF-AP34(1)-D	121161	8	767483	1.22	1	500	15.17	87	NA	NA	39.240	39	
	Fluoranthene		267188	8	544446	1.32	1	500	15.17	87	NA	NA	112.754	80	
	Pyrene		232964	8	544446	1.43	1	500	15.17	87	NA	NA	90.462	90	
	Benzo (a) anthracene		117908	8	544446	1.42	1	500	15.17	87	NA	NA	46.253	46	
	Chrysene		130103	8	487267	1.32	1	500	15.17	87	NA	NA	61.346	61	
	Benzo (b) fluoranthene		140569	8	487267	1.64	1	500	15.17	87	NA	NA	53.367	53	
	Benzo (k) fluoranthene		157426	8	487267	1.51	1	500	15.17	87	NA	NA	64.962	65	
	Benzo (a) pyrene		121762	8	487267	1.29	1	500	15.17	87	NA	NA	58.794	59	
	Indeno (1,2,3-cd) pyrene		113124	8	487267	1.50	1	500	15.17	87	NA	NA	46.908	47	
	Dibenzo (a,h) anthracene		44805	8	487267	1.25	1	500	15.17	87	NA	NA	22.282	22	J
	Benzo (g,h,l) perylene		100144	8	487267	1.16	1	500	15.17	87	NA	NA	53.516	54	
247954	Indeno (1,2,3-cd) pyrene	JPM3-ITF-AF57(2)	51273	8	425703	1.50	1	500	15.38	75	NA	NA	28.022	28	J
	Dibenzo (a,h) anthracene		39547	8	425703	1.25	1	500	15.38	75	NA	NA	25.921	26	J
	Benzo (g,h,l) perylene		43341	8	425703	1.16	1	500	15.38	75	NA	NA	30.526	31	J
247954	Fluoranthene	JPM3-ITF-AP30(2)	27543	8	466358	1.32	1	500	15.79	71	NA	NA	16.018	16	J
	Pyrene		24662	8	466358	1.43	1	500	15.79	71	NA	NA	13.198	13	J
247954	Fluoranthene	JPM3-ITF-AP31(2)	24147	8	559599	1.32	1	500	15.31	71	NA	NA	12.055	12	J
	Chrysene		18832	8	542462	1.32	1	500	15.31	71	NA	NA	9.698	9	J
248048	Phenanthrene	JPM3-ITF-AP36(1)	59438	8	1104094	1.19	1	500	15.10	78	NA	NA	15.346	15	J
	Fluoranthene		152525	8	1104094	1.17	1	500	15.10	78	NA	NA	39.898	40	J
	Pyrene		144791	8	1104094	1.34	1	500	15.10	78	NA	NA	33.242	34	J
	Benzo (a) anthracene		91269	8	1104094	1.41	1	500	15.10	78	NA	NA	19.870	21	J
	Chrysene		124357	8	1067303	1.27	1	500	15.10	78	NA	NA	31.157	31	J
	Benzo (b) fluoranthene		188201	8	1067303	1.46	1	500	15.10	78	NA	NA	41.101	42	J
	Benzo (k) fluoranthene		96902	8	1067303	1.44	1	500	15.10	78	NA	NA	21.447	22	J
	Benzo (a) pyrene		113882	8	1046462	1.32	1	500	15.10	78	NA	NA	27.987	28	J
	Indeno (1,2,3-cd) pyrene		99055	8	1046462	1.51	1	500	15.10	78	NA	NA	21.267	21	J
	Dibenzo (a,h) anthracene		52350	8	1046462	1.26	1	500	15.10	78	NA	NA	13.454	13	J

SDG - sample delivery group
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PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene

Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

A = Sample Area

B = Internal Standard Concentration

C = Volume Purged

D = Internal Standard Area

E = Initial Calibration Response Factor

F = Sample Weight

SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
248048	Benzo (g,h,l) perylene		107032	8	1046462	1.19	1	500	15.10	78	NA	NA	29.167		29 J
	Acenaphthylene	JPM3-ITF-AP37(1)	46107	8	1392634	1.93	1	500	15.70	76	NA	NA	5.749		10 J
	Phenanthrene		50397	8	1271333	1.19	1	500	15.70	76	NA	NA	11.167		11 J
	Anthracene		4085	8	1271333	1.17	1	500	15.70	76	NA	NA	0.924		9.2 J
	Fluoranthene		124064	8	1271333	1.17	1	500	15.70	76	NA	NA	27.852		28 J
	Pyrene		117512	8	1271333	1.34	1	500	15.70	76	NA	NA	23.154		25 J
	Benzo (a) anthracene		68798	8	1271333	1.41	1	500	15.70	76	NA	NA	12.854		14 J
	Chrysene		121448	8	1159996	1.27	1	500	15.70	76	NA	NA	27.667		28 J
	Benzo (b) fluoranthene		218230	8	1159996	1.46	1	500	15.70	76	NA	NA	43.334		46 J
	Benzo (k) fluoranthene		97062	8	1159996	1.44	1	500	15.70	76	NA	NA	19.533		21 J
	Benzo (a) pyrene		108668	8	1159996	1.32	1	500	15.70	76	NA	NA	23.808		25 J
	Indeno (1,2,3-cd) pyrene		140095	8	1099840	1.51	1	500	15.70	76	NA	NA	28.282		28 J
	Dibenzo (a,h) anthracene		50517	8	1099840	1.26	1	500	15.70	76	NA	NA	12.207		12 J
	Benzo (g,h,l) perylene		142850	8	1099840	1.19	1	500	15.70	76	NA	NA	36.602		37 J
248048	Fluoranthene	JPM3-ITF-AP38(1)	94054	8	1483617	1.17	1	500	15.47	76	NA	NA	18.354		18 J
	Pyrene		78850	8	1483617	1.34	1	500	15.47	76	NA	NA	13.505		14 J
	Chrysene		71013	8	1395932	1.27	1	500	15.47	76	NA	NA	13.637		14 J
	Benzo (b) fluoranthene		94087	8	1395932	1.46	1	500	15.47	76	NA	NA	15.749		16 J
248048	Phenanthrene	JPM3-ITF-AP71(2)	143615	8	1333475	1.19	1	500	15.31	73	NA	NA	32.568		33 J
	Fluoranthene		290870	8	1333475	1.17	1	500	15.31	73	NA	NA	66.827		67 J
	Pyrene		263372	8	1333475	1.34	1	500	15.31	73	NA	NA	53.109		54 J
	Benzo (a) anthracene		104758	8	1313820	1.41	1	500	15.31	73	NA	NA	20.331		20 J
	Chrysene		149347	8	1313820	1.27	1	500	15.31	73	NA	NA	32.245		32 J
	Benzo (b) fluoranthene		155151	8	1313820	1.46	1	500	15.31	73	NA	NA	29.199		32 J
	Benzo (k) fluoranthene		82248	8	1313820	1.44	1	500	15.31	73	NA	NA	15.687		17 J
	Benzo (a) pyrene		93056	8	1198488	1.32	1	500	15.31	73	NA	NA	21.182		21 J
	Indeno (1,2,3-cd) pyrene		73298	8	1198488	1.51	1	500	15.31	73	NA	NA	14.576		15 J
	Benzo (g,h,l) perylene		77454	8	1198488	1.19	1	500	15.31	73	NA	NA	19.549		20 J
248065	Phenanthrene	JPM3-ITF-AF81(2)	130611	8	1248785	1.19	1	500	15.50	80	NA	NA	28.453		28 J
	Fluoranthene		249964	8	1176351	1.17	1	500	15.50	80	NA	NA	58.566		55 J
	Pyrene		230428	8	1176351	1.34	1	500	15.50	80	NA	NA	47.385		47 J
	Benzo (a) anthracene		106322	8	1248785	1.41	1	500	15.50	80	NA	NA	19.530		21 J
	Chrysene		131952	8	1176351	1.27	1	500	15.50	80	NA	NA	28.625		29 J
	Benzo (b) fluoranthene		147766	8	1203906	1.46	1	500	15.50	80	NA	NA	27.302		27 J
	Benzo (k) fluoranthene		89240	8	1203906	1.44	1	500	15.50	80	NA	NA	16.710		17 J
	Benzo (a) pyrene		85725	8	1203906	1.32	1	500	15.50	80	NA	NA	17.475		17 J
	Indeno (1,2,3-cd) pyrene		68389	8	1203906	1.51	1	500	15.50	80	NA	NA	12.180		12 J
	Benzo (g,h,l) perylene		71214	8	1203906	1.19	1	500	15.50	80	NA	NA	16.098		16 J
248065	Phenanthrene	JPM3-ITF-AF82(2)	244596	8	1386592	1.19	1	500	15.30	85	NA	NA	45.593		46 J
	Fluoranthene		357670	8	1319214	1.17	1	500	15.30	85	NA	NA	70.997		68 J
	Pyrene		288510	8	1319214	1.34	1	500	15.30	85	NA	NA	50.264		50 J
	Benzo (a) anthracene		189736	8	1386592	1.41	1	500	15.30	85	NA	NA	29.822		31 J
	Chrysene		298555	8	1319214	1.27	1	500	15.30	85	NA	NA	54.870		55 J
	Benzo (b) fluoranthene		422853	8	1295833	1.46	1	500	15.30	85	NA	NA	68.963		69 J
	Benzo (k) fluoranthene		154049	8	1295833	1.44	1	500	15.30	85	NA	NA	25.462		25 J
	Benzo (a) pyrene		197129	8	1295833	1.32	1	500	15.30	85	NA	NA	35.471		35 J
	Indeno (1,2,3-cd) pyrene		206398	8	1295833	1.51	1	500	15.30	85	NA	NA	32.447		32 J
	Benzo (g,h,l) perylene		192327	8	1295833	1.19	1	500	15.30	85	NA	NA	38.375		38 J
248160	Benzo (a) anthracene	JPM3-ITF-AF95(2)	23164	8	493355	1.44	1	500	15.41	77	NA	NA	10.916		14 J
	Chrysene		20951	8	386700	1.31	1	500	15.41	77	NA	NA	13.901		14 J
	Benzo (b) fluoranthene		21929	8	386700	1.47	1	500	15.41	77	NA	NA	12.914		14 J
	Benzo (k) fluoranthene		25213	8	363265	1.49	1	500	15.41	77	NA	NA	15.631		16 J

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Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

A = Sample Area

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C = Volume Purged

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F = Sample Weight

SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
	Benzo (a) pyrene		18908	8	363265	1.33	1	500	15.41	77	NA	NA	13.087		13J
	Indeno (1,2,3-cd) pyrene		40419	8	363265	1.61	1	500	15.41	77	NA	NA	23.146		23J
	Dibenzo (a,h) anthracene		36012	8	363265	40.00	1	500	15.41	77	NA	NA	0.831		22J
	Benzo (g,h,i) perylene		41438	8	363265	1.27	1	500	15.41	77	NA	NA	30.193		30J
248160	Fluoranthene	JPM3-ITF-AF97(2)	70482	8	880720	1.33	1	500	15.25	87	NA	NA	18.181		18J
	Pyrene		65920	8	880720	1.43	1	500	15.25	87	NA	NA	15.884		15J
	Benzo (a) anthracene		69878	8	880720	1.44	1	500	15.25	87	NA	NA	16.681		16J
	Chrysene		58978	8	920853	1.31	1	500	15.25	87	NA	NA	14.860		15J
	Benzo (b) fluoranthene		110761	8	920853	1.47	1	500	15.25	87	NA	NA	24.769		28J
	Benzo (k) fluoranthene		58590	8	920853	1.49	1	500	15.25	87	NA	NA	12.958		14J
	Benzo (a) pyrene		63233	8	920853	1.33	1	500	15.25	87	NA	NA	15.613		17J
	Indeno (1,2,3-cd) pyrene		67643	8	920853	1.61	1	500	15.25	87	NA	NA	13.819		15J
	Benzo (g,h,i) perylene		67755	8	920853	1.27	1	500	15.25	87	NA	NA	17.611		20J
248182	Naphthalene	JPM3-ITF-AF103(2)	21523	8	596787	1.05	1	500	15.41	85	NA	NA	10.510		10J
	Phenanthrene		76309	8	596787	1.17	1	500	15.41	85	NA	NA	33.285		31J
	Fluoranthene		121054	8	581859	1.33	1	500	15.41	85	NA	NA	47.598		43J
	Pyrene		99526	8	581859	1.43	1	500	15.41	85	NA	NA	36.554		36J
	Benzo (a) anthracene		57228	8	581859	1.44	1	500	15.41	85	NA	NA	20.823		20J
	Chrysene		67429	8	581859	1.31	1	500	15.41	85	NA	NA	27.077		26J
	Benzo (b) fluoranthene		85585	8	581859	1.47	1	500	15.41	85	NA	NA	30.502		31J
	Benzo (k) fluoranthene		47133	8	581859	1.49	1	500	15.41	85	NA	NA	16.613		17J
	Benzo (a) pyrene		42711	8	581859	1.33	1	500	15.41	85	NA	NA	16.807		17J
	Indeno (1,2,3-cd) pyrene		50300	8	581859	1.61	1	500	15.41	85	NA	NA	16.377		16J
	Dibenzo (a,h) anthracene		33853	8	581859	40.00	1	500	15.41	85	NA	NA	0.444		9.4J
	Benzo (g,h,i) perylene		52539	8	581859	1.27	1	500	15.41	85	NA	NA	21.764		22J
248190	Phenanthrene	JPM3-ITF-AF111(2)	200208	8	696724	1.173	1	500	15.19	90	NA	NA	71.844		72J
	Anthracene		49011	8	696724	1.153	1	500	15.19	90	NA	NA	17.900		18J
	Fluoranthene		534048	8	696724	1.335	1	500	15.19	90	NA	NA	168.429		170J
	Pyrene		450371	8	696724	1.43	1	500	15.19	90	NA	NA	132.676		130J
	Benzo (a) anthracene		244959	8	696278	1.442	1	500	15.19	90	NA	NA	71.538		72J
	Chrysene		289696	8	696278	1.307	1	500	15.19	90	NA	NA	93.368		93J
	Benzo (b) fluoranthene		381843	8	696278	1.473	1	500	15.19	90	NA	NA	109.226		110J
	Benzo (k) fluoranthene		188512	8	696278	1.489	1	500	15.19	90	NA	NA	53.330		53J
	Benzo (a) pyrene		238689	8	696278	1.334	1	500	15.19	90	NA	NA	75.385		75J
	Indeno (1,2,3-cd) pyrene		215384	8	702874	1.612	1	500	15.19	90	NA	NA	55.755		56J
	Dibenzo (a,h) anthracene		73721	8	702874	40.000	1	500	15.19	90	NA	NA	0.769		21J
	Benzo (g,h,i) perylene		204803	8	702874	1.267	1	500	15.19	90	NA	NA	67.454		67J
248208	Phenanthrene	JPM3-ITF-AP50(1)	66821	8	673236	1.173	1	500	15.73	87	NA	NA	24.649		25J
	Fluoranthene		292729	8	673236	1.335	1	500	15.73	87	NA	NA	94.904		95J
	Pyrene		247726	8	673236	1.43	1	500	15.73	87	NA	NA	75.020		73J
	Benzo (a) anthracene		170844	8	689658	1.442	1	500	15.73	87	NA	NA	50.036		50J
	Chrysene		199620	8	689658	1.307	1	500	15.73	87	NA	NA	64.520		65J
	Benzo (b) fluoranthene		278019	8	652120	1.473	1	500	15.73	87	NA	NA	84.345		84J
	Benzo (k) fluoranthene		179731	8	652120	1.489	1	500	15.73	87	NA	NA	53.926		54J
	Benzo (a) pyrene		144459	8	652120	1.334	1	500	15.73	87	NA	NA	48.388		48J
	Indeno (1,2,3-cd) pyrene		127258	8	652120	1.612	1	500	15.73	87	NA	NA	35.269		35J
	Benzo (g,h,i) perylene		117312	8	652120	1.267	1	500	15.73	87	NA	NA	41.367		41J
248208	Phenanthrene	JPM3-ITF-AP51(1)	141174	8	682974	1.173	1	500	15.38	82	NA	NA	55.832		56J
	Anthracene		78900	8	682974	1.153	1	500	15.38	82	NA	NA	31.759		32J
	Fluoranthene		390412	8	682974	1.335	1	500	15.38	82	NA	NA	135.699		140J
	Pyrene		344801	8	682974	1.43	1	500	15.38	82	NA	NA	111.947		110J
	Benzo (a) anthracene		266672	8	718253	1.442	1	500	15.38	82	NA	NA	81.562		82J

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Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 7 of 14)

Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

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SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
	Chrysene		321606	8	718253	1.307	1	500	15.38	82	NA	NA	108.554		110
	Benzo (b) fluoranthene		443947	8	702345	1.473	1	500	15.38	82	NA	NA	136.009		140
	Benzo (k) fluoranthene		411374	8	702345	1.489	1	500	15.38	82	NA	NA	124.642		120
	Benzo (a) pyrene		275515	8	702345	1.334	1	500	15.38	82	NA	NA	93.195		93
	Indeno (1,2,3-cd) pyrene		282738	8	702345	1.612	1	500	15.38	82	NA	NA	79.130		79
	Dibenzo (a,h) anthracene		115503	8	702345	40.000	1	500	15.38	82	NA	NA	1.303		38 J
	Benzo (g,h,i) perylene		262583	8	702345	1.267	1	500	15.38	82	NA	NA	93.503		84
248233	Phenanthrene	JPM3-ITF-AF118(2)	147337	8	749745	1.173	1	500	15.01	87	NA	NA	51.184		51
	Anthracene		36735	8	749745	1.153	1	500	15.01	87	NA	NA	12.989		13 J
	Fluoranthene		406953	8	761258	1.335	1	500	15.01	87	NA	NA	122.369		120
	Pyrene		342318	8	717515	1.43	1	500	15.01	87	NA	NA	102.011		100
	Benzo (a) anthracene		245122	8	717515	1.442	1	500	15.01	87	NA	NA	72.367		72
	Chrysene		265950	8	717515	1.307	1	500	15.01	87	NA	NA	86.650		87
	Benzo (b) fluoranthene		306356	8	664155	1.473	1	500	15.01	87	NA	NA	95.707		96
	Benzo (k) fluoranthene		184876	8	664155	1.489	1	500	15.01	87	NA	NA	57.121		57
	Benzo (a) pyrene		190253	8	664155	1.334	1	500	15.01	87	NA	NA	65.624		66
	Indeno (1,2,3-cd) pyrene		167354	8	664155	1.612	1	500	15.01	87	NA	NA	47.761		48
	Dibenzo (a,h) anthracene		45339	8	664155	40.000	1	500	15.01	87	NA	NA	0.521		12 J
	Benzo (g,h,i) perylene		148775	8	664155	1.267	1	500	15.01	87	NA	NA	54.022		54
248233	Phenanthrene	JPM3-ITF-AF119(2)	63291	8	888276	1.173	1	500	15.03	97	NA	NA	21.554		22
	Fluoranthene		234951	8	688276	1.335	1	500	15.03	97	NA	NA	70.321		70
	Pyrene		208248	8	611925	1.43	1	500	15.03	97	NA	NA	65.484		65
	Benzo (a) anthracene		145257	8	611925	1.442	1	500	15.03	97	NA	NA	45.252		45
	Chrysene		147973	8	611925	1.307	1	500	15.03	97	NA	NA	50.874		51
	Benzo (b) fluoranthene		196652	8	516790	1.473	1	500	15.03	97	NA	NA	71.053		71
	Benzo (k) fluoranthene		98583	8	516790	1.489	1	500	15.03	97	NA	NA	35.227		35
	Benzo (a) pyrene		123771	8	516790	1.334	1	500	15.03	97	NA	NA	49.375		49
	Indeno (1,2,3-cd) pyrene		111994	8	516790	1.612	1	500	15.03	97	NA	NA	36.966		37
	Dibenzo (a,h) anthracene		43400	8	516790	40.000	1	500	15.03	97	NA	NA	0.577		14 J
	Benzo (g,h,i) perylene		105568	8	516790	1.267	1	500	15.03	97	NA	NA	44.334		44 J
248248	Naphthalene	JPM3-ITF-AP61(1)	26719	8	707441	1.048	1	500	15.22	91	NA	NA	10.453		10 J
	Acenaphthylene		29983	8	411974	2.042	1	500	15.22	91	NA	NA	10.336		9.9 J
	Acenaphthene		13387	8	411974	1.125	1	500	15.22	91	NA	NA	8.374		8.1
	Fluorene		15085	8	411974	1.367	1	500	15.22	91	NA	NA	7.768		7.5
	Phenanthrene		434435	8	710283	1.173	1	500	15.22	91	NA	NA	151.211		150
	Anthracene		109731	8	710283	1.153	1	500	15.22	91	NA	NA	38.873		37
	Fluoranthene		1467000	8	710283	1.335	1	500	15.22	91	NA	NA	448.761		430
	Pyrene		1290886	8	710283	1.429	1	500	15.22	91	NA	NA	368.859		370
	Benzo (a) anthracene		968587	8	710283	1.442	1	500	15.22	91	NA	NA	274.190		280
	Chrysene		882711	8	707441	1.307	1	500	15.22	91	NA	NA	276.876		280
	Benzo (b) fluoranthene		1345551	8	707441	1.473	1	500	15.22	91	NA	NA	374.589		380
	Benzo (k) fluoranthene		1278153	8	707441	1.489	1	500	15.22	91	NA	NA	351.909		360
	Benzo (a) pyrene		1043553	8	707441	1.334	1	500	15.22	91	NA	NA	320.759		320
	Indeno (1,2,3-cd) pyrene		808970	8	677868	1.612	1	500	15.22	91	NA	NA	214.710		210
	Dibenzo (a,h) anthracene		308365	8	672633	40.000	1	500	15.22	91	NA	NA	3.324		100
	Benzo (g,h,i) perylene		820374	8	672633	1.267	1	500	15.22	91	NA	NA	279.191		270
248248	Naphthalene	JPM3-ITF-AP63(1)	34220	8	662842	1.048	1	500	15.82	84	NA	NA	14.762		15 J
	Acenaphthylene		71065	8	392485	2.042	1	500	15.82	84	NA	NA	26.568		27 J
	Acenaphthene		104414	8	392485	1.125	1	500	15.82	84	NA	NA	70.828		73
	Fluorene		120081	8	392485	1.367	1	500	15.82	84	NA	NA	67.061		69
	Phenanthrene		2624969	8	662842	1.173	1	500	15.82	84	NA	NA	1011.503		1000
	Anthracene		495517	8	633490	1.153	1	500	15.82	84	NA	NA	203.345		200

SDG - sample delivery group
ug/kg - micrograms per kilogram
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene

Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 8 of 14)

Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

A = Sample Area

B = Internal Standard Concentration

C = Volume Purged

D = Internal Standard Area

E = Initial Calibration Response Factor

F = Sample Weight

SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
	Fluoranthene		6222717	8	633490	1.335	1	500	15.82	84	NA	NA	2205.055	2200	
	Pyrene		5388978	8	662842	1.429	1	500	15.82	84	NA	NA	1704.761	1700	
	Benzo (a) anthracene		3241739	8	662842	1.442	1	500	15.82	84	NA	NA	1015.957	1000	
	Chrysene		2830373	8	662842	1.307	1	500	15.82	84	NA	NA	978.935	980	
	Benzo (b) fluoranthene		3895262	8	607822	1.473	1	500	15.82	84	NA	NA	1303.971	1300	
	Benzo (k) fluoranthene		2667585	8	607822	1.489	1	500	15.82	84	NA	NA	883.166	870	
	Benzo (a) pyrene		2758506	8	607822	1.334	1	500	15.82	84	NA	NA	1019.565	1000	
	Indeno (1,2,3-cd) pyrene		2054071	8	607822	1.612	1	500	15.82	84	NA	NA	628.155	620	
	Dibenzo (a,h) anthracene		854653	8	607822	40.000	1	500	15.82	84	NA	NA	10.532	340	
	Benzo (g,h,i) perylene		1945333	8	607822	1.267	1	500	15.82	84	NA	NA	756.917	750	
248271	Phenanthrene	JPM3-ITF-AF125(2)	34327	8	645458	1.173	1	500	15.15	83	NA	NA	14.426	14	J
	Fluoranthene		110212	8	645458	1.335	1	500	15.15	83	NA	NA	40.706	41	
	Pyrene		107750	8	590962	1.429	1	500	15.15	83	NA	NA	40.602	41	
	Benzo (a) anthracene		121019	8	590962	1.442	1	500	15.15	83	NA	NA	45.177	45	
	Chrysene		127565	8	590962	1.307	1	500	15.15	83	NA	NA	52.555	53	
	Benzo (b) fluoranthene		142790	8	538469	1.473	1	500	15.15	83	NA	NA	57.301	57	
	Benzo (k) fluoranthene		177778	8	538469	1.489	1	500	15.15	83	NA	NA	70.556	71	
	Benzo (a) pyrene		100879	8	538469	1.334	1	500	15.15	83	NA	NA	44.697	45	
	Indeno (1,2,3-cd) pyrene		93623	8	538469	1.612	1	500	15.15	83	NA	NA	34.322	34	J
	Dibenzo (a,h) anthracene		43382	8	538469	40.000	1	500	15.15	83	NA	NA	0.641	16	J
	Benzo (g,h,i) perylene		80866	8	538469	1.267	1	500	15.15	83	NA	NA	37.718	38	J
248271	Phenanthrene	JPM3-ITF-AF126(2)	48550	8	630444	1.173	1	500	15.33	83	NA	NA	20.658	21	J
	Anthracene		34732	8	630444	1.153	1	500	15.33	83	NA	NA	15.041	15	J
	Fluoranthene		258062	8	630444	1.335	1	500	15.33	83	NA	NA	96.503	97	
	Pyrene		216538	8	484077	1.429	1	500	15.33	83	NA	NA	98.508	99	
	Benzo (a) anthracene		179379	8	484077	1.442	1	500	15.33	83	NA	NA	80.844	81	
	Chrysene		219985	8	484077	1.307	1	500	15.33	83	NA	NA	109.417	110	
	Benzo (b) fluoranthene		204213	8	444874	1.473	1	500	15.33	83	NA	NA	98.093	98	
	Benzo (k) fluoranthene		187006	8	444874	1.489	1	500	15.33	83	NA	NA	88.839	89	
	Benzo (a) pyrene		147775	8	444874	1.334	1	500	15.33	83	NA	NA	78.373	78	
	Indeno (1,2,3-cd) pyrene		135901	8	444874	1.612	1	500	15.33	83	NA	NA	59.634	60	
	Dibenzo (a,h) anthracene		56646	8	444874	40.000	1	500	15.33	83	NA	NA	1.002	28	J
	Benzo (g,h,i) perylene		119572	8	444874	1.267	1	500	15.33	83	NA	NA	66.759	67	
248289	Phenanthrene	JPM3-ITF-AP64(1)	132048	8	588641	1.173	1	500	15.32	83	NA	NA	60.445	60	
	Anthracene		32611	8	588641	1.153	1	500	15.32	83	NA	NA	15.193	15	J
	Fluoranthene		286806	8	588641	1.335	1	500	15.32	83	NA	NA	115.383	120	
	Pyrene		243814	8	426767	1.429	1	500	15.32	83	NA	NA	126.375	130	
	Benzo (a) anthracene		118900	8	426767	1.442	1	500	15.32	83	NA	NA	61.056	61	
	Chrysene		144111	8	426767	1.307	1	500	15.32	83	NA	NA	81.668	82	
	Benzo (b) fluoranthene		194470	8	373489	1.473	1	500	15.32	83	NA	NA	111.766	110	
	Benzo (k) fluoranthene		111499	8	373489	1.489	1	500	15.32	83	NA	NA	63.375	63	
	Benzo (a) pyrene		113940	8	373489	1.334	1	500	15.32	83	NA	NA	72.301	72	
	Indeno (1,2,3-cd) pyrene		93985	8	373489	1.612	1	500	15.32	83	NA	NA	49.344	49	
	Dibenzo (a,h) anthracene		57005	8	373489	40.000	1	500	15.32	83	NA	NA	1.206	35	J
	Benzo (g,h,i) perylene		96875	8	373489	1.267	1	500	15.32	83	NA	NA	64.713	65	
248289	Phenanthrene	JPM3-ITF-AP65(1)	250617	8	748111	1.173	1	500	15.45	85	NA	NA	87.396	87	
	Anthracene		57974	8	748111	1.153	1	500	15.45	85	NA	NA	20.577	21	J
	Fluoranthene		733987	8	770341	1.335	1	500	15.45	85	NA	NA	218.464	220	
	Pyrene		637302	8	650332	1.429	1	500	15.45	85	NA	NA	209.881	210	
	Benzo (a) anthracene		397155	8	650332	1.442	1	500	15.45	85	NA	NA	129.577	130	
	Chrysene		475244	8	650332	1.307	1	500	15.45	85	NA	NA	171.119	170	
	Benzo (b) fluoranthene		690438	8	650332	1.473	1	500	15.45	85	NA	NA	220.644	220	

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Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 9 of 14)

Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

A = Sample Area

B = Internal Standard Concentration

C = Volume Purged

D = Internal Standard Area

E = Initial Calibration Response Factor

F = Sample Weight

SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
	Benzo (k) fluoranthene		383567	8	650332	1.489	1	500	15.45	85	NA	NA	121.228	120	
	Benzo (a) pyrene		427420	8	650332	1.334	1	500	15.45	85	NA	NA	150.811	150	
	Indeno (1,2,3-cd) pyrene		370078	8	650332	1.612	1	500	15.45	85	NA	NA	108.039	110	
	Dibenzo (a,h) anthracene		95610	8	650332	40.000	1	500	15.45	85	NA	NA	1.125	32	J
	Benzo (g,h,i) perylene		371996	8	650332	1.267	1	500	15.45	85	NA	NA	138.175	140	
248301	Acenaphthylene	JPM3-ITF-AP68(1)	51768	8	646323	1.84	1	500	15.68	88	NA	NA	12.543	13	J
	Acenaphthene		28356	8	646323	1.13	1	500	15.68	88	NA	NA	11.235	11	J
	Fluorene		24101	8	1005615	1.28	1	500	15.68	88	NA	NA	5.402	8.4	J
	Phenanthrene		517981	8	1005615	1.24	1	500	15.68	88	NA	NA	120.338	120	
	Anthracene		131482	8	1005615	1.17	1	500	15.68	88	NA	NA	32.263	32	J
	Fluoranthene		1680337	8	1005615	1.29	1	500	15.68	88	NA	NA	374.462	370	
	Pyrene		1525749	8	1011467	1.32	1	500	15.68	88	NA	NA	329.805	330	
	Benzo (a) anthracene		954235	8	1011467	1.425	1	500	15.68	88	NA	NA	191.242	190	
	Chrysene		1422488	8	1020594	1.173	1	500	15.68	88	NA	NA	343.259	350	
	Benzo (b) fluoranthene		1832799	8	1020594	1.479	1	500	15.68	88	NA	NA	350.681	350	
	Benzo (k) fluoranthene		1074526	8	1020594	1.540	1	500	15.68	88	NA	NA	197.426	200	
	Benzo (a) pyrene		924519	8	1020594	1.351	1	500	15.68	88	NA	NA	193.710	190	
	Indeno (1,2,3-cd) pyrene		779928	8	1020594	1.499	1	500	15.68	88	NA	NA	147.208	150	
	Dibenzo (a,h) anthracene		195794	8	1020594	1.265	1	500	15.68	88	NA	NA	43.816	44	
	Benzo (g,h,i) perylene		744554	8	1020594	1.233	1	500	15.68	88	NA	NA	170.891	170	
248301	Acenaphthene	JPM3-ITF-AP69(1)	114590	8	790236	1.13	1	500	15.11	79	NA	NA	42.872	43	
	Fluorene		135839	8	790236	1.28	1	500	15.11	79	NA	NA	44.734	45	
	Phenanthrene		2516777	8	1262734	1.24	1	500	15.11	79	NA	NA	537.618	540	
	Anthracene		529749	8	1262734	1.17	1	500	15.11	79	NA	NA	119.520	120	
	Fluoranthene		4354123	8	1262734	1.29	1	500	15.11	79	NA	NA	892.177	890	
	Pyrene		3716414	8	1340809	1.32	1	500	15.11	79	NA	NA	699.685	700	
	Benzo (a) anthracene		1975573	8	1340809	1.425	1	500	15.11	79	NA	NA	344.845	340	
	Chrysene		1919836	8	1315776	1.173	1	500	15.11	79	NA	NA	414.884	410	
	Benzo (b) fluoranthene		2712720	8	1315776	1.479	1	500	15.11	79	NA	NA	464.828	460	
	Benzo (k) fluoranthene		1051226	8	1315776	1.540	1	500	15.11	79	NA	NA	172.971	170	
	Benzo (a) pyrene		1748153	8	1315776	1.351	1	500	15.11	79	NA	NA	328.024	330	
	Indeno (1,2,3-cd) pyrene		1182827	8	1315776	1.499	1	500	15.11	79	NA	NA	199.935	200	
	Dibenzo (a,h) anthracene		324364	8	1315776	1.265	1	500	15.11	79	NA	NA	65.006	65	
	Benzo (g,h,i) perylene		1168287	8	1315776	1.233	1	500	15.11	79	NA	NA	240.139	240	
248327	Phenanthrene	JPM3-ITF-AF143(2)	246264	8	944668	1.24	1	500	15.26	86	NA	NA	64.349	64	
	Anthracene		66392	8	944668	1.17	1	500	15.26	86	NA	NA	18.323	18	J
	Fluoranthene		720034	8	944668	1.29	1	500	15.26	86	NA	NA	180.474	180	
	Pyrene		647478	8	1024449	1.32	1	500	15.26	86	NA	NA	146.002	150	
	Benzo (a) anthracene		387401	8	1024449	1.425	1	500	15.26	86	NA	NA	80.993	81	
	Chrysene		484656	8	1024449	1.173	1	500	15.26	86	NA	NA	123.103	120	
	Benzo (b) fluoranthene		703524	8	995545	1.479	1	500	15.26	86	NA	NA	145.803	150	
	Benzo (k) fluoranthene		291423	8	995545	1.540	1	500	15.26	86	NA	NA	57.996	58	
	Benzo (a) pyrene		439144	8	995545	1.351	1	500	15.26	86	NA	NA	99.663	100	
	Indeno (1,2,3-cd) pyrene		346980	8	995545	1.499	1	500	15.26	86	NA	NA	70.937	71	
	Dibenzo (a,h) anthracene		126843	8	995545	1.265	1	500	15.26	86	NA	NA	30.746	31	J
	Benzo (g,h,i) perylene		344292	8	995545	1.233	1	500	15.26	86	NA	NA	85.593	86	
248327	Phenanthrene	JPM3-ITF-AF145(2)	138379	8	954740	1.24	1	500	15.66	81	NA	NA	36.968	37	J
	Anthracene		62011	8	954740	1.17	1	500	15.66	81	NA	NA	17.497	17	J
	Fluoranthene		498705	8	954740	1.29	1	500	15.66	81	NA	NA	127.795	130	
	Pyrene		465176	8	1009060	1.32	1	500	15.66	81	NA	NA	110.037	110	
	Benzo (a) anthracene		321850	8	1009060	1.425	1	500	15.66	81	NA	NA	70.588	71	
	Chrysene		378096	8	1009060	1.173	1	500	15.66	81	NA	NA	100.745	100	

Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 10 of 14)

Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

A = Sample Area

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C = Volume Purged

D = Internal Standard Area

E = Initial Calibration Response Factor

F = Sample Weight

SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
	Benzo (b) fluoranthene		539289	8	1048686	1.479	1	500	15.66	81	NA	NA	109.633	110	
	Benzo (k) fluoranthene		292858	8	1048686	1.540	1	500	15.66	81	NA	NA	57.170	57	
	Benzo (a) pyrene		327060	8	1048686	1.351	1	500	15.66	81	NA	NA	72.809	73	
	Indeno (1,2,3-cd) pyrene		241189	8	1048686	1.499	1	500	15.66	81	NA	NA	48.368	48	
	Dibenzo (a,h) anthracene		90490	8	1048686	1.265	1	500	15.66	81	NA	NA	21.515	22	J
	Benzo (g,h,i) perylene		249993	8	1048686	1.233	1	500	15.66	81	NA	NA	60.964	61	
248423	Fluoranthene	JPM3-ITF-AF158(2)	20569	8	419812	1.36	1	500	15.13	74	NA	NA	12.816	13	J
	Pyrene		19097	8	430530	1.39	1	500	15.13	74	NA	NA	11.348	11	J
	Benzo (b) fluoranthene		21691	8	410470	1.45	1	500	15.13	74	NA	NA	12.971	13	J
	Benzo (a) pyrene		12624	8	410470	1.29	1	500	15.13	74	NA	NA	8.458	8.5	J
248439	Naphthalene	JPM3-ITF-AF167(2)	19830	8	403820	1.03	1	500	15.39	82	NA	NA	15.067	15	J
	Phenanthrene		16005	8	355338	1.14	1	500	15.39	82	NA	NA	12.515	13	J
	Fluoranthene		36770	8	355338	1.36	1	500	15.39	82	NA	NA	24.147	24	J
	Pyrene		70325	8	387895	1.39	1	500	15.39	82	NA	NA	41.377	41	
	Benzo (a) anthracene		16431	8	387895	1.44	1	500	15.39	82	NA	NA	9.326	9.3	J
	Chrysene		27864	8	387895	1.33	1	500	15.39	82	NA	NA	17.095	17	J
	Benzo (g,h,i) perylene		22894	8	325223	1.22	1	500	15.39	82	NA	NA	18.342	18	J
248537	Phenanthrene	JPM3-ITF-AP77(1)	218688	8	840633	1.21	1	500	15.29	80	NA	NA	70.376	70	
	Anthracene		49171	8	840633	1.20	1	500	15.29	80	NA	NA	15.894	16	J
	Fluoranthene		382577	8	840633	1.28	1	500	15.29	80	NA	NA	116.443	120	
	Pyrene		320317	8	772891	1.50	1	500	15.29	80	NA	NA	90.650	91	
	Benzo (a) anthracene		146717	8	783553	1.34	1	500	15.29	80	NA	NA	45.694	46	
	Benzo (b) fluoranthene		160507	8	783553	1.45	1	500	15.29	80	NA	NA	46.369	46	
	Benzo (a) pyrene		137029	8	783553	1.23	1	500	15.29	80	NA	NA	46.525	47	
	Indeno (1,2,3-cd) pyrene		121214	8	783553	1.49	1	500	15.29	80	NA	NA	33.959	34	J
	Benzo (g,h,i) perylene		98844	8	783553	1.24	1	500	15.29	80	NA	NA	33.157	33	J
248537	Fluoranthene	JPM3-ITF-AP78(1)	35514	8	761198	1.28	1	500	15.75	74	NA	NA	12.461	12	J
	Pyrene		33703	8	694231	1.50	1	500	15.75	74	NA	NA	11.084	11	J
248537	Pyrene	JPM3-ITF-AF168(2)	39526	8	461068	1.50	10	500	15.51	86	NA	NA	172.679	170	J
248926	Fluoranthene	JPM3-ITF-AF169	58736	8	1071124	1.33	1	500	15.89	78	NA	NA	13.322	13	J
	Pyrene		50427	8	1071124	1.41	1	500	15.89	78	NA	NA	10.802	11	J
248926	Fluoranthene	JPM3-ITF-AF178	38455	8	1149406	1.33	1	500	15.51	75	NA	NA	8.694	8.7	J
	Benzo (b) fluoranthene		34921	8	637783	1.47	1	500	15.51	75	NA	NA	12.865	13	J
248981	Fluoranthene	JPM3-ITF-AF189(2)	52525	8	992873	1.29	1	500	15.07	74	NA	NA	14.701	15	J
	Pyrene		50307	8	888714	1.41	1	500	15.07	74	NA	NA	14.436	14	J
	Benzo (a) anthracene		34529	8	888714	1.43	1	500	15.07	74	NA	NA	9.751	9.8	J
	Chrysene		33792	8	888714	1.31	1	500	15.07	74	NA	NA	10.435	10	J
	Benzo (b) fluoranthene		58247	8	888714	1.50	1	500	15.07	74	NA	NA	15.706	16	J
	Benzo (a) pyrene		36617	8	888714	1.34	1	500	15.07	74	NA	NA	11.016	11	J
248981	Fluoranthene	JPM3-ITF-AF190(2)	81466	8	1203286	1.29	1	500	15.20	70	NA	NA	19.662	20	J
	Pyrene		96265	8	1070386	1.41	1	500	15.20	70	NA	NA	23.969	24	J
	Benzo (a) anthracene		58384	8	1070386	1.43	1	500	15.20	70	NA	NA	14.306	14	J
	Chrysene		90733	8	1070386	1.31	1	500	15.20	70	NA	NA	24.310	24	J
	Benzo (b) fluoranthene		150108	8	1070386	1.50	1	500	15.20	70	NA	NA	35.119	35	J
	Benzo (k) fluoranthene		95619	8	1070386	1.51	1	500	15.20	70	NA	NA	22.223	22	J
	Benzo (a) pyrene		92520	8	1070386	1.34	1	500	15.20	70	NA	NA	24.151	24	J
	Indeno (1,2,3-cd) pyrene		95884	8	1070386	1.60	1	500	15.20	70	NA	NA	20.999	21	J
	Benzo (g,h,i) perylene		93924	8	1070386	1.24	1	500	15.20	70	NA	NA	26.473	26	J
249025	Fluoranthene	JPM3-ITF-AF192(2)	47479	8	1766754	1.291	2	500	15.61	76	NA	NA	14.111	15	J
	Pyrene		43607	8	1766754	1.429	2	500	15.61	76	NA	NA	11.705	13	J
	Benzo (a) anthracene		64375	8	1766754	1.406	2	500	15.61	76	NA	NA	17.563	19	J
	Chrysene		69077	8	1766754	1.307	2	500	15.61	76	NA	NA	20.273	22	J

SDG - sample delivery group
ug/kg - micrograms per kilogram
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene

Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 11 of 14)

Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

A = Sample Area

B = Internal Standard Concentration

C = Volume Purged

D = Internal Standard Area

E = Initial Calibration Response Factor

F = Sample Weight

SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
	Benzo (b) fluoranthene		120324	8	1766754	1.497	2	500	15.61	76	NA	NA	30.836		33J
	Benzo (k) fluoranthene		92158	8	1766754	1.507	2	500	15.61	76	NA	NA	23.461		25J
	Benzo (a) pyrene		78004	8	1766754	1.342	2	500	15.61	76	NA	NA	22.304		24J
	Indeno (1,2,3-cd) pyrene		53467	8	1766754	1.599	2	500	15.61	76	NA	NA	12.826		14J
	Dibenzo (a,h) anthracene		33986	8	1766754	1.322	2	500	15.61	76	NA	NA	9.859		10J
	Benzo (g,h,i) perylene		46663	8	1766754	1.242	2	500	15.61	76	NA	NA	14.407		15J
249025	Benzo (a) anthracene	JPM3-ITF-AF193(2)	34934	8	1829429	1.406	2	500	15.26	75	NA	NA	9.453		11J
	Chrysene		40338	8	1829429	1.307	2	500	15.26	75	NA	NA	11.742		14J
	Benzo (b) fluoranthene		89980	8	1829429	1.497	2	500	15.26	75	NA	NA	22.871		25J
	Benzo (k) fluoranthene		87406	8	1829429	1.507	2	500	15.26	75	NA	NA	22.069		24J
	Benzo (a) pyrene		65635	8	1829429	1.342	2	500	15.26	75	NA	NA	18.614		21J
	Indeno (1,2,3-cd) pyrene		49991	8	1829429	1.599	2	500	15.26	75	NA	NA	11.895		13J
	Dibenzo (a,h) anthracene		34718	8	1829429	1.322	2	500	15.26	75	NA	NA	9.989		11J
	Benzo (g,h,i) perylene		41450	8	1829429	1.242	2	500	15.26	75	NA	NA	12.693		14J
249025	Benzo (b) fluoranthene	JPM3-ITF-AF196(2)	38366	8	1119928	1.497	2	500	15.84	74	NA	NA	15.665		18J
	Benzo (k) fluoranthene		27209	8	1119928	1.507	2	500	15.84	74	NA	NA	11.036		13J
	Benzo (a) pyrene		33734	8	1119928	1.342	2	500	15.84	74	NA	NA	15.367		18J
	Indeno (1,2,3-cd) pyrene		35257	8	1119928	1.599	2	500	15.84	74	NA	NA	13.475		16J
	Dibenzo (a,h) anthracene		22925	8	1119928	1.322	2	500	15.84	74	NA	NA	10.595		12J
	Benzo (g,h,i) perylene		29382	8	1119928	1.242	2	500	15.84	74	NA	NA	14.452		17J
249177	Benzo (b) fluoranthene	JPM3-ITF-AF213(2)	28709	8	1181995	1.44	2	500	15.48	72	NA	NA	12.175		12J
	Benzo (a) pyrene		25985	8	1284049	1.21	2	500	15.48	72	NA	NA	12.096		12J
	Indeno (1,2,3-cd) pyrene		42734	8	1284049	1.46	2	500	15.48	72	NA	NA	16.442		17J
	Dibenzo (a,h) anthracene		35229	8	1284049	1.17	2	500	15.48	72	NA	NA	16.940		17J
249177	Fluoranthene	JPM3-ITF-AF217(2)	39167	8	1810571	1.22	2	500	15.41	68	NA	NA	13.601		15J
	Pyrene		35879	8	1308474	1.52	2	500	15.41	68	NA	NA	13.850		12J
	Benzo (a) anthracene		26462	8	1810571	1.35	2	500	15.41	68	NA	NA	8.310		9.9J
	Chrysene		34181	8	1810571	1.31	2	500	15.41	68	NA	NA	11.074		13J
	Benzo (b) fluoranthene		50402	8	1810571	1.44	2	500	15.41	68	NA	NA	14.826		17J
	Benzo (a) pyrene		28024	8	1810571	1.21	2	500	15.41	68	NA	NA	9.129		11J
249177	Benzo (b) fluoranthene	JPM3-ITF-AF218(2)	75075	8	1401174	1.44	2	500	15.66	74	NA	NA	25.685		24J
	Benzo (k) fluoranthene		50613	8	1401174	1.38	2	500	15.66	74	NA	NA	18.099		17J
	Benzo (a) pyrene		56268	8	1401174	1.21	2	500	15.66	74	NA	NA	22.957		22J
	Indeno (1,2,3-cd) pyrene		49069	8	1401174	1.46	2	500	15.66	74	NA	NA	16.546		16J
	Dibenzo (a,h) anthracene		33516	8	1401174	1.17	2	500	15.66	74	NA	NA	14.124		13J
249177	Indeno (1,2,3-cd) pyrene	JPM3-ITF-AF219(2)	36746	8	1774763	1.46	2	500	15.57	76	NA	NA	9.592		11J
	Dibenzo (a,h) anthracene		28114	8	1774763	1.17	2	500	15.57	76	NA	NA	9.172		10J
249177	Fluoranthene	JPM3-ITF-AF221(2)	24985	8	1659486	1.22	2	500	15.30	73	NA	NA	8.863		10J
	Indeno (1,2,3-cd) pyrene		36525	8	1659486	1.46	2	500	15.30	73	NA	NA	10.817		13J
	Dibenzo (a,h) anthracene		22647	8	1659486	1.17	2	500	15.30	73	NA	NA	8.362		10J
249439	Phenanthrene	JPM3-ITF-AF235(2)	31926	8	1386296	1.13	2	500	15.30	74	NA	NA	14.436		15J
	Fluoranthene		86622	8	1386296	1.21	2	500	15.30	74	NA	NA	36.667		37J
	Pyrene		77056	8	1386296	1.27	2	500	15.30	74	NA	NA	30.918		33J
	Benzo (a) anthracene		48904	8	1386296	1.31	2	500	15.30	74	NA	NA	19.140		21J
	Benzo (b) fluoranthene		67484	8	1386296	1.47	2	500	15.30	74	NA	NA	23.472		26J
	Benzo (a) pyrene		42176	8	1386296	1.20	2	500	15.30	74	NA	NA	17.900		20J
	Indeno (1,2,3-cd) pyrene		40712	8	1386296	1.37	2	500	15.30	74	NA	NA	15.208		17J
	Benzo (g,h,i) perylene		41219	8	1386296	1.13	2	500	15.30	74	NA	NA	18.677		20J
249439	Fluoranthene	JPM3-ITF-AF238(2)	22967	8	1501518	1.21	2	500	15.36	73	NA	NA	9.087		9.5J
249487	Fluoranthene	JPM3-ITF-AF244(2)	27519	8	1540322	1.21	2	500	15.26	78	NA	NA	9.986		12J
249487	Phenanthrene	JPM3-ITF-AF245(2)	17330	8	1370527	1.13	2	500	15.60	76	NA	NA	7.561		9J
	Fluoranthene		37215	8	1370527	1.21	2	500	15.60	76	NA	NA	15.200		18J

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Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 12 of 14)

Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

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C = Volume Purged

D = Internal Standard Area

E = Initial Calibration Response Factor

F = Sample Weight

SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
	Pyrene		31468	8	993340	1.27	2	500	15.60	76	NA	NA	16.809	16	J
	Benzo (a) anthracene		17277	8	993340	1.31	2	500	15.60	76	NA	NA	9.002	8.5	J
	Benzo (b) fluoranthene		29682	8	993340	1.47	2	500	15.60	76	NA	NA	13.744	14	J
	Indeno (1,2,3-cd) pyrene		18123	8	993340	1.37	2	500	15.60	76	NA	NA	9.013	8.9	J
249487	Fluoranthene	JPM3-ITF-AF244(2)	22716	8	1342873	1.21	2	500	15.30	78	NA	NA	9.428	9.6	J
250183	Fluoranthene	JPM3-ITF-A101(1)	46586	8	2633153	1.07	2	500	15.12	71	NA	NA	12.356	18	J
	Benzo (g,h,i) perylene		33274	8	2633153	0.99	2	500	15.12	71	NA	NA	9.560	11	J
500-4270	Naphthalene	JPL2-PF2(2)	153135	8	2296652	0.89	2	500	15.64	78	NA	NA	49.244	41	J
	Acenaphthene		23706	8	2169635	1.07	2	500	15.64	78	NA	NA	6.742	11	J
	Fluorene		51454	8	2169635	1.23	2	500	15.64	78	NA	NA	12.713	18	J
	Phenanthrene		203504	8	2169635	1.13	2	500	15.64	78	NA	NA	54.611	57	J
	Benzo (a) anthracene		40145	8	2296652	1.23	2	500	15.64	78	NA	NA	9.327	9.6	J
500-4270	Acenaphthene	JPL2-PF3(2)	472842	8	1657670	1.07	2	500	15.35	83	NA	NA	168.662	280	J
	Benzo (a) pyrene		38505	8	2020035	1.08	2	500	15.35	83	NA	NA	11.148	11	J
	Benzo (b) fluoranthene		66869	8	2020035	1.26	2	500	15.35	83	NA	NA	16.592	16	J
	Benzo (g,h,i) perylene		51093	8	2020035	1.07	2	500	15.35	83	NA	NA	14.887	15	J
	Chrysene		87823	8	2020035	1.11	2	500	15.35	83	NA	NA	24.822	23	J
	Fluorene		891096	8	1657670	1.23	2	500	15.35	83	NA	NA	276.127	410	J
	Phenanthrene		3082686	8	2020035	1.13	2	500	15.35	83	NA	NA	851.382	870	J
	Pyrene		572321	8	2020035	1.27	2	500	15.35	83	NA	NA	141.141	130	J
500-4317	Acenaphthene	JPL2-AST-TF2(4)	59170	8	611942	1.10	10	500	15.26	81	NA	NA	283.177	280	J
	Anthracene		66853	8	1113649	1.21	10	500	15.26	81	NA	NA	160.689	160	J
	Benzo (a) anthracene		74818	8	1320881	1.33	10	500	15.26	81	NA	NA	138.017	140	J
	Benzo (a) pyrene		87446	8	1320881	1.15	10	500	15.26	81	NA	NA	185.954	190	J
	Benzo (b) fluoranthene		92198	8	1320881	1.34	10	500	15.26	81	NA	NA	168.098	170	J
	Benzo (g,h,i) perylene		96294	8	1320881	1.12	10	500	15.26	81	NA	NA	209.902	210	J
	Benzo (k) fluoranthene		95161	8	1320881	1.34	10	500	15.26	81	NA	NA	173.397	170	J
	Chrysene		62813	8	1320881	1.20	10	500	15.26	81	NA	NA	127.864	130	J
	Fluorene		192958	8	611942	1.43	10	500	15.26	81	NA	NA	711.557	710	J
	Phenanthrene		285814	8	1113649	1.24	10	500	15.26	81	NA	NA	669.360	670	J
	Pyrene		72031	8	1320881	1.38	10	500	15.26	81	NA	NA	127.961	130	J
500-4317	Benzo (g,h,i) perylene	JPL2-AST-TP3(0.5)	100263	8	1154617	1.12	1	2000	15.23	94	NA	NA	86.471	86	J
500-4472	Benzo (g,h,i) perylene	JPL2-TP4(1)	29558	8	497793	1.07	1	5000	15.24	94	NA	NA	155.468	160	J
500-4472	Benzo (a) anthracene	JPL2-TP6(1)	34153	8	562768	1.23	1	500	15.71	87	NA	NA	14.346	14	J
	Benzo (a) pyrene		44836	8	562768	1.08	1	500	15.71	87	NA	NA	21.543	22	J
	Benzo (b) fluoranthene		54693	8	562768	1.26	1	500	15.71	87	NA	NA	22.523	23	J
	Benzo (g,h,i) perylene		46531	8	562768	1.07	1	500	15.71	87	NA	NA	22.502	22	J
	Benzo (k) fluoranthene		57920	8	562768	1.18	1	500	15.71	87	NA	NA	25.513	26	J
	Chrysene		44688	8	589962	1.11	1	500	15.71	87	NA	NA	19.996	20	J
500-4472	Benzo (a) anthracene	JPL2-TF3(5)	26208	8	543045	1.23	1	500	15.22	87	NA	NA	11.811	12	J
	Benzo (a) pyrene		41287	8	497960	1.08	1	500	15.22	87	NA	NA	23.211	23	J
	Benzo (b) fluoranthene		49900	8	497960	1.26	1	500	15.22	87	NA	NA	24.044	24	J
	Benzo (g,h,i) perylene		58697	8	497960	1.07	1	500	15.22	87	NA	NA	33.212	33	J
	Benzo (k) fluoranthene		40435	8	497960	1.18	1	500	15.22	87	NA	NA	20.839	21	J
	Chrysene		27983	8	543045	1.11	1	500	15.22	87	NA	NA	14.083	14	J
500-4427	Acenaphthene	JPL2-PF6(4)	162539	8	358629	1.07	1	500	15.93	91	NA	NA	117.211	120	J
	Anthracene		148797	8	528547	1.09	1	500	15.93	91	NA	NA	71.246	70	J
	Fluorene		432624	8	358629	1.23	1	500	15.93	91	NA	NA	271.022	270	J
	Phenanthrene		880369	8	538547	1.13	1	500	15.93	91	NA	NA	398.888	400	J
	Pyrene		107925	8	598102	1.27	1	500	15.93	91	NA	NA	39.317	39	J
500-5265	Dichloronaphthalene	JPL5-PCN-1(3)	1468261	8	531042	1.39	1	500	15.25	93			561.274	560	J
	Trichloronaphthalene		364028	8	606498	0.47	50	500	15.25	93			18048.651	19000	J

Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 13 of 14)

Laboratory: Severn Trent/ Test America

GC/MS Sample Results = (A * B * C)/(D * E * F)

where:

A = Sample Area

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D = Internal Standard Area

E = Initial Calibration Response Factor

F = Sample Weight

SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
	Tetrachloronaphthalene		439811	8	606498	0.42	50	500	15.25	93			24463.858	26000	
	Pentachloronaphthalene		96994	8	422603	0.37	50	500	15.25	93			8786.941	8800	
	Hexachloronaphthalene		50613	8	472485	0.31	10	500	15.25	93			989.977	990	
	Heptachloronaphthalene		95348	8	677856	0.20	1	500	15.25	93			201.442	200	
	Octachloronaphthalene		32211	8	677856	0.19	1	500	15.25	93			70.798	71	
500-5265	Dichloronaphthalene	JPL5-PCN-2(3)	264133	8	512253	1.39	1	500	15.31	89			109.195	110	
	Trichloronaphthalene		298791	8	571286	0.47	10	500	15.31	89			3281.317	3300	
	Tetrachloronaphthalene		419401	8	571286	0.42	10	500	15.31	89			5167.245	5200	
	Pentachloronaphthalene		100254	8	456560	0.37	10	500	15.31	89			1753.978	1800	
	Hexachloronaphthalene		1043843	8	652117	0.31	1	500	15.31	89			1543.212	150	
500-5265	Dichloronaphthalene	JPL5-PCN-3(3)	262254	8	599855	1.39	1	500	15.50	94			86.685	87	
	Trichloronaphthalene		180568	8	535919	0.47	20	500	15.50	94			3958.293	4000	
	Tetrachloronaphthalene		307749	8	535919	0.42	20	500	15.50	94			7568.549	7600	
	Pentachloronaphthalene		74711	8	447311	0.37	20	500	15.50	94			2498.201	2500	
	Hexachloronaphthalene		167918	8	797224	0.31	1	500	15.50	94			190.123	190	
	Heptachloronaphthalene		21986	8	797224	0.20	1	500	15.50	94			38.575	39	
500-5265	Dichloronaphthalene	JPL5-PCN-4(3)	110815	8	514963	1.39	1	500	15.30	94			43.265	43	
	Trichloronaphthalene		223390	8	624617	0.47	10	500	15.30	94			2130.264	2100	
	Tetrachloronaphthalene		390098	8	624617	0.42	10	500	15.30	94			4173.422	4200	
	Pentachloronaphthalene		98036	8	478358	0.37	10	500	15.30	94			1554.183	1600	
	Hexachloronaphthalene		103348	8	637798	0.31	1	500	15.30	94			148.315	150	
	Heptachloronaphthalene		11089	8	637798	0.20	1	500	15.30	94			24.660	25	J
500-5265	Dichloronaphthalene	JPL5-PCN-5(3)	281363	8	658637	1.39	1	500	15.65	95			82.681	83	
	Trichloronaphthalene		220758	8	526895	0.47	20	500	15.65	95			4804.784	4800	
	Tetrachloronaphthalene		290775	8	526895	0.42	20	500	15.65	95			7100.082	7100	
	Pentachloronaphthalene		58247	8	448636	0.37	20	500	15.65	95			1895.601	1900	
	Hexachloronaphthalene		101320	8	898358	0.31	1	500	15.65	95			99.375	99	
500-5285	Dichloronaphthalene	JPL5-PCN-16(3)	19496	8	419048	1.389	1	500	15.25	93			9.468	9.5	J
	Trichloronaphthalene		197114	8	636022	0.469	1	500	15.25	93			186.850	190	
	Tetrachloronaphthalene		240048	8	636022	0.418	1	500	15.25	93			255.283	260	
	Pentachloronaphthalene		70131	8	525943	0.368	1	500	15.25	93			102.354	100	
500-5285	Dichloronaphthalene	JPL5-PCN-17(3)	52439	8	381476	1.389	1	500	15.49	93			27.419	27	J
	Trichloronaphthalene		502901	8	583314	0.469	1	500	15.49	93			509.472	510	
	Tetrachloronaphthalene		584491	8	583314	0.418	1	500	15.49	93			664.300	660	
	Pentachloronaphthalene		133261	8	466199	0.368	1	500	15.49	93			215.059	220	
	Hexachloronaphthalene		14942	8	466199	0.305	1	500	15.49	93			29.104	29	J
	Heptachloronaphthalene		2462	8	466199	0.197	1	500	15.49	93			7.431	7.4	J
500-5285	Dichloronaphthalene	JPL5-PCN-18(3)	20501	8	468091	1.389	1	500	15.93	93			8.553	8.6	J
	Trichloronaphthalene		212700	8	710816	0.469	1	500	15.93	93			173.112	170	
	Tetrachloronaphthalene		210096	8	710816	0.418	1	500	15.93	93			191.834	190	
	Pentachloronaphthalene		48885	8	584042	0.368	1	500	15.93	93			61.650	62	
500-5285	Dichloronaphthalene	JPL5-PCN-1(3)	397311	8	388042	1.39	1	500	15.70	94			200.399	200	
	Trichloronaphthalene		318319	8	587385	0.47	20	500	15.70	94			6284.673	6300	
	Tetrachloronaphthalene		368664	8	587385	0.42	20	500	15.70	94			8165.819	8200	
	Pentachloronaphthalene		97960	8	521145	0.37	20	500	15.70	94			2775.360	2800	
	Hexachloronaphthalene		85393	8	466256	0.31	1	500	15.70	94			163.190	160	
	Heptachloronaphthalene		9990	8	466256	0.20	1	500	15.70	94			29.584	30	J
500-5285	Dichloronaphthalene	JPL5-PCN-2(3)	143828	8	397246	1.39	1	500	15.45	94			71.619	72	
	Trichloronaphthalene		237190	8	496781	0.47	10	500	15.45	94			2797.996	2800	
	Tetrachloronaphthalene		408207	8	496781	0.42	10	500	15.45	94			5402.317	5400	
	Pentachloronaphthalene		117309	8	414563	0.37	10	500	15.45	94			2111.264	2100	
	Hexachloronaphthalene		91349	8	474096	0.31	1	500	15.45	94			173.514	170	

SDG - sample delivery group
ug/kg - micrograms per kilogram
PAH - polynuclear aromatic hydrocarbon
PCN - polychlorinated naphthalene

Appendix K

PAH/PCN Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 14 of 14)

Laboratory: Severn Trent/ Test America

GC/MS Sample Results = $(A * B * C)/(D * E * F)$

where:

A = Sample Area

B = Internal Standard Concentration

C = Volume Purged

D = Internal Standard Area

E = Initial Calibration Response Factor

F = Sample Weight

SDG	Analyte	Sample Identification	Sample Area	Internal Standard Concentration	Internal Standard Area	Initial Calibration Response Factor	Dilution Factor	Volume Extracted	Sample Weight	Percent Solid	Slope	Intercept	Recalculated Results	Reported Results	Lab Flag
	Heptachloronaphthalene		13380	8	474096	0.20	1	500	15.45	94			39.383	39	J
500-5954	Trichloronaphthalene	JPL5-PCN2-24(5)	208069	8	938207	5.000	1	500	15.84	88			12.784	130	
	Tetrachloronaphthalene		212734	8	1062968	0.478	1	500	15.84	88			120.670	120	
	Pentachloronaphthalene		55289	8	938207	0.432	1	500	15.84	88			39.306	39	
500-5954	Dichloronaphthalene	JPL5-PCN2-26(5)	68347	8	804240	1.395	1	500	15.85	88			17.555	18	J
	Trichloronaphthalene		430490	8	804240	5.000	1	500	15.85	88			30.849	250	
	Tetrachloronaphthalene		437761	8	1184317	0.478	1	500	15.85	88			222.827	220	
	Pentachloronaphthalene		97235	8	1048765	0.432	1	500	15.85	88			61.827	62	
500-14347	Benzo (a) anthracene	JPL5-RS-AP1(0.5)	99675	8	848238	1.15	1	500	15.42	90			29.423	29	J
	Benzo (b) fluoranthene		172498	8	1001825	1.12	1	500	15.42	90			44.193	44	
	Benzo (k) fluoranthene		90004	8	1001825	1.06	1	500	15.42	90			24.436	24	J
	Fluoranthene		80832	8	848238	1.22	1	500	15.42	90			22.432	23	J
	Phenanthrene		23682	8	820950	1.10	1	500	15.42	90			7.532	7.5	J
	Pyrene		88820	8	820950	1.23	1	500	15.42	90			25.323	25	J
500-14347	Benzo (a) anthracene	JPL5-RS-AP4(0.5)	78024	8	626080	1.15	1	500	15.25	87			32.634	33	J
	Benzo (a) pyrene		94499	8	694594	0.96	1	500	15.25	87			42.528	43	
	Benzo (b) fluoranthene		118314	8	694594	1.12	1	500	15.25	87			45.721	46	
	Benzo (k) fluoranthene		135812	8	694594	1.06	1	500	15.25	87			55.617	56	
	Chrysene		87017	8	626080	1.00	1	500	15.25	87			41.584	42	
	Fluoranthene		56964	8	724544	1.22	1	500	15.25	87			19.355	19	J
	Pyrene		62857	8	626080	1.23	1	500	15.25	87			24.575	25	J

APPENDIX L

**POLYCHLORINATED BIPHENYLS SAMPLE CALCULATION
VERIFICATION**

Appendix L

PCB Sample Result Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 1 of 1)

Laboratory: Severn Trent

Concentration = On column *DF*CF*VF/(VI*W*(%S/100))

Where:

DF = dilution factor

CF - Correction Factor

VF - Final extract volume

VI - Volume injected

W - Weight of sample extracted

%S - percent solid

SDG	Analyte	Sample Identification	On column	DF	CF	Volume injected	Volume Extracted	Sample Weight	Percent Solid	Recalculated Results	Reported Results
Soil Samples (ug/kg)											
250005	Aroclor 1260	JPL5-I1(1)	0.06984	1	1	1.000	5000	15.18	78.0	29.5	29.0
250012	Aroclor 1260	JPL5-I1(1)	0.59335	10	1	1.000	5000	15.07	96.9	2031.2	2000.0
249966	Aroclor 1260	JPL5-A1 (1)	0	2000	1	1.000	5000	15.25	87.0	ND	38000 U
249972	Aroclor 1260	JPL5-D5(1)	0	1	1	1.000	5000	15.78	81.4	ND	19 U
249981	Aroclor 1260	JPL5-E1(1)	0.30444	2	1	1.000	5000	15.31	73.4	270.9	270.0
249992	Aroclor 1260	JPL5-G2(1)	0.05464	1	1	1.000	5000	15.23	80.4	22.3	20.0
500-4792	Aroclor 1260	JPL5-AP1(0.5)	0.05999	1	1	1.000	5000	15.31	94.82	20.7	21.0
500-4954	Aroclor 1260	JPL5-1(3)	0.0375	1	1	1.000	5000	15.35	87.547	14.0	14.0
500-4954	Aroclor 1260	JP-L5-6(3)	0.08473	1	1	1.000	5000	15.53	83.36	32.7	33.0
500-5265	Aroclor 1260	JPL5-PCN-6(3)	0	10	1	1.000	5000	15.05	92.84	0.0	ND
500-5306	Aroclor 1260	JPL5-14(3)	0.13356	1	1	1.000	5000	15.74	84.48	50.2	50.0
500-5933	Aroclor 1260	JPL5-PCN2-9(5)	0	1	1	1.000	5000	15.34	72.059	0.0	ND

APPENDIX M

**TOTAL PETROLEUM HYDROCARBONS SAMPLE CALCULATION
VERIFICATION**

Appendix M

TPH Sample Result Calculation Verification

Joliet Army Ammunition Plant SRU2 and SRU3 LAP

(Page 1 of 1)

Laboratory: Severn Trent

Concentration = On column *DF*CF*VF/(VI*W*(%S/100))

Where:

DF = dilution factor

CF - Correction Factor

VF - Final extract volume

VI - Volume injected

W - Weight of sample extracted

%S - percent solid

SDG	Analyte	Sample Identification	On column	DF	CF	Volume injected	Volume Extracted	Sample Weight	Percent Solid	Recalculated Results	Reported Results
Soil Samples (ug/kg)											
248084	TPH-GRO	JPM3-ITF-AF86(2)	0	1	1	NA	NA	5.00	84.2	ND	ND
248084	TPH-DRO	JPM3-ITF-AF87(2)	426.92	1	0.002	2.000	2500	15.03	84.2	84.3	84
248307	TPH-GRO	JPM3-ITF-133(2)	0	1	1	NA	NA	5.00	82.7	ND	ND
248307	TPH-DRO	JPM3-ITF-133(2)	543.505	1	0.002	2.000	2500	15.08	82.7	109.0	110
248379	TPH-GRO	JPM3-ITF-AF154(2)	6.52504	1	5	1.000	1	5.00	74.1	8.8	8.8
248379	TPH-DRO	JPM3-ITF-AF154(2)	172.434	1	0.002	2.000	2500	15.95	74.1	36.5	36
250224	TPH-GRO	JPM3-ITF-AF209B(1)	0	1	1	NA	NA	5.00	57.5	ND	ND
250224	TPH-DRO	JPM3-ITF-AF209B(1)	74.5944	1	0.002	2.000	2500	15.25	57.5	21.3	21
500-4317	TPH-GRO	JPL2-AST-TF2(4)	290.51	500	5	1	1	5.00	81.1	179107	180000
500-4317	TPH-DRO	JPL2-AST-TF2(4)	485.32	50	0.002	2.000	2500	15.30	81.1	4889	4900
500-4427	TPH-GRO	JPL2-PF5(4)	82	1	5	1.000	1	5.00	79.8	102.8	100
500-4427	TPH-DRO	JPL2-PF5(4)	294.8	20	0.002	2.000	2500	15.49	79.8	1192.7	1200
500-4472	TPH-GRO	JPL2-TP4(1)	ND	1	5	1.000	1	5.00	93.5	ND	ND
500-4472	TPH-DRO	JPL2-TP4(1)	210.6	10	0.002	2.000	2500	15.56	93.5	361.9	360
500-5501	TPH-GRO	JPL5-AP34(0.5)	ND	1	5	1.000	1	5.00	94.3	ND	ND
500-5501	TPH-DRO	JPL5-AP34(0.5)	48.226	1	0.002	2.000	2500	15.19	94.3	8.4	8.4
500-5501	TPH-GRO	JPL5-AF10(3)	ND	1	5	1.000	1	5.00	89.5	ND	ND
500-5501	TPH-DRO	JPL5-AF10(3)	19.9	1	0.002	2.000	2500	15.92	89.5	3.5	3.5
500-5501	TPH-GRO	JPL5-AF20(3)	ND	1	5	1.000	1	5.00	95.1	ND	ND
500-5501	TPH-DRO	JPL5-AF20(3)	20.197	1	0.002	2.000	2500	15.41	95.1	3.4	3.4
500-6612	TPH-GRO	JPL5-SP1(1)	ND	1	8	1.000	1	5.00	68.1	ND	ND
500-6612	TPH-DRO	JPL5-SP1(1)	148.8	1	0.002	2.000	2500	15.37	68.1	35.5	36
500-6332	TPH-GRO	JPL5-AP42(0.5)	ND	1	5	2.000	1	5.00	84.3	ND	ND
500-6332	TPH-DRO	JPL5-AP42(0.5)	185.05	1	0.002	2.000	2500	15.75	84.3	34.8	35
500-5499	TPH-GRO	JPL5-AP10(0.5)	ND	1	5	2.000	1	5.00	86	ND	ND
500-5499	TPH-DRO	JPL5-AP10(0.5)	164.677	1	0.002	2.000	2500	15.45	85.1	31.3	35
500-5499	TPH-GRO	JPL5-AP19(0.5)	ND	1	5	2.000	1	5.00	90	ND	ND
500-5499	TPH-DRO	JPL5-AP19(0.5)	39.76	1	0.002	2.000	2500	15.14	90	7.3	7.3
500-5499	TPH-GRO	JPL5-AP31(0.5)	ND	1	5	2.000	1	5.00	89	ND	ND
500-5499	TPH-DRO	JPL5-AP31(0.5)	66.81	1	0.002	2.000	2500	15.93	89	11.8	12

DRO - diesel range organics
 GRO - gasoline range organics
 TPH - total petroleum hydrocarbons
 SDG - sample delivery group
 ug/kg - microgram per kilogram

APPENDIX N

METALS SAMPLE CALCULATION VERIFICATION

Appendix N-1

Metals Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 10)

Laboratory: Severn Trent

ICP mg/kg dry weight = A * B * C/d *(% solids/100))

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Wet weight of sample

SDG	Analyte	Sample Identification	ICP/AA reading	Final Volume	Dilution Factor	Sample Weight	% solid	Recalculated Results	Reported Results
Soil Metals Samples (mg/kg)									
247739	Lead	JPM3-OTF-AP19(1)	0.18612	100	1	1.10	78.8	21.39	21
247739	Zinc	JPM3-OTF-AP19(1)	0.72324	100	1	1.10	78.8	83.13	83
247739	Lead	JPM3-OTF-AP19(1)D	0.16329	100	1	1.01	79.9	20.31	20
247739	Zinc	JPM3-OTF-AP19(1)D	0.66048	100	1	1.01	79.9	82.14	82
247739	Lead	JPM3-OTF-AP22(1)	0.47398	100	1	1.08	78.5	56.08	56
247739	Zinc	JPM3-OTF-AP22(1)	0.82300	100	1	1.08	78.5	97.38	97
247748	Arsenic	JPM3-ITF-AP8(1)	0.12524	100	1	1.04	79.7	15.05	15
247748	Copper	JPM3-ITF-AP8(1)	0.42680	100	1	1.04	79.7	51.28	51
247748	Zinc	JPM3-ITF-AP8(1)	2.12890	100	1	1.04	79.9	255.14	260
247748	Arsenic	JPM3-ITF-AP9(1)	0.20471	100	1	1.12	85.6	21.42	21
247748	Copper	JPM3-ITF-AP9(1)	3.21400	100	1	1.12	85.6	336.26	340
247748	Lead	JPM3-ITF-AP9(1)	7.67530	100	1	1.12	85.6	803.02	800
247748	Zinc	JPM3-ITF-AP9(1)	4.63630	100	1	1.12	85.6	485.07	490
247748	Arsenic	JPM3-ITF-AF11(1)	0.15749	100	1	1.04	92.4	16.34	16
247748	Copper	JPM3-ITF-AF11(1)	1.33300	100	1	1.04	92.4	138.34	140
247748	Lead	JPM3-ITF-AF11(1)	5.37000	100	1	1.04	92.4	557.32	560
247748	Zinc	JPM3-ITF-AF11(1)	6.55720	100	1	1.04	92.4	680.53	680
247748	Arsenic	JPM3-ITF-AF11(3)	0.05208	100	1	1.16	82.8	5.43	5
247748	Copper	JPM3-ITF-AF11(3)	0.22691	100	1	1.16	82.8	23.68	24
247748	Zinc	JPM3-ITF-AF11(3)	0.75992	100	1	1.16	82.8	79.30	79
247748	Arsenic	JPM3-ITF-AF12(2)	0.07329	100	1	1.02	81.1	8.87	9
247748	Copper	JPM3-ITF-AF12(2)	0.22190	100	1	1.02	81.1	26.86	27
247748	Zinc	JPM3-ITF-AF12(2)	0.47794	100	1	1.02	81.1	57.86	58
247884	Antimony	JPM3-ITF-AF46(2)	0.00805	100	1	1.11	76.4	0.95	0.95
247884	Copper	JPM3-ITF-AF46(2)	0.27599	100	1	1.11	76.4	32.68	33
247884	Lead	JPM3-ITF-AF46(2)	0.14455	100	1	1.11	76.4	17.12	17
247884	Zinc	JPM3-ITF-AF46(2)	0.54517	100	1	1.11	76.4	64.56	65
247884	Antimony	JPM3-ITF-AF48(2)	0.00929	100	1	1.11	77.6	1.08	1.1
247884	Copper	JPM3-ITF-AF48(2)	0.27514	100	1	1.11	77.6	31.98	32
247884	Lead	JPM3-ITF-AF48(2)	0.36671	100	1	1.11	77.6	42.63	43
247884	Silver	JPM3-ITF-AF48(2)	0.00304	100	1	1.11	77.6	0.35	0.35
247884	Zinc	JPM3-ITF-AF48(2)	0.80914	100	1	1.11	77.6	94.06	94
247884	Antimony	JPM3-ITF-AF49(2)	0.10122	100	1	1.12	78.3	1.17	1.2
247884	Copper	JPM3-ITF-AF49(2)	0.27234	100	1	1.12	78.3	31.08	31
247884	Lead	JPM3-ITF-AF49(2)	0.50335	100	1	1.12	78.3	57.44	57
247884	Silver	JPM3-ITF-AF49(2)	0.00276	100	1	1.12	78.3	0.31	0.31
247884	Zinc	JPM3-ITF-AF49(2)	0.83630	100	1	1.12	78.3	95.44	95
248048	Lead	JPM3-ITF-AF75(2)	0.94051	100	1	1.25	64.5	116.96	120.00
248048	Zinc	JPM3-ITF-AF75(2)	1.25140	100	1	1.25	64.5	155.62	160.00
248301	Lead	JPM3-ITF-AF140(2)	0.77651	100	1	1.04	79.1	94.68	95.00
248307	Copper	JPM3-ITF-AF130(2)	0.14071	100	1	1.02	84.1	16.45	16.00
248926	Lead	JPM3-ITF-AF171	1.43870	100	1	1.05	80.3	170.42	170.00
248927	Lead	JPM12-DITCH-CP12	3.35070	100	1	1.07	75.6	413.21	410.00
248927	Lead	JPM12-DITCH-CP5	2.74390	100	1	1.15	48.5	492.52	490.00
248927	Lead	JPM12-DITCH-CP2	3.04760	100	1	1.18	60.0	430.20	430.00
248981	Lead	JPM3-ITF-AF180(2)	0.26993	100	1	1.08	70.4	35.62	36
248981	Lead	JPM3-ITF-AF181(2)	1.50820	100	1	1.04	69.1	209.61	210
248981	Lead	JPM3-ITF-AF183(2)	0.64258	100	1	1.03	74.3	83.86	84
248981	Lead	JPM3-ITF-AF184(2)	0.15387	100	1	1.13	70.0	19.52	20
249025	Antimony	JPM3-ITF-AF197(2)	0.00807	100	1	1.07	77.5	0.97	0.97 B
249025	Barium	JPM3-ITF-AF197(2)	1.06760	100	1	1.07	77.5	128.20	130.00
249025	Copper	JPM3-ITF-AF197(2)	0.18973	100	1	1.07	77.5	22.78	23.00
249025	Lead	JPM3-ITF-AF197(2)	0.13693	100	1	1.07	77.5	16.44	16.00
249025	Zinc	JPM3-ITF-AF197(2)	0.42344	100	1	1.07	77.5	50.85	51.00
249049	Lead	JPM4-CP12	1.78400	100	1	1.14	67.4	231.59	230
249049	Lead	JPM4-CP18	1.32980	100	1	1.05	57.5	219.90	220
249049	Lead	JPM4-CP22	0.39620	100	1	1.07	44.9	82.61	83
249049	Lead	JPM4-CP26	0.12993	100	1	1.01	53.4	24.11	24
249049	Lead	JPM4-CP4	0.27280	100	1	1.16	70.6	33.20	33
249049	Lead	JPM4-CP6	0.23748	100	1	1.18	68.2	29.45	29
249049	Lead	JPM4-CP7	1.17870	100	1	1.20	68.0	144.14	140
249072	Lead	JPM12-CP16	0.61116	100	1	1.03	64.6	91.88	92.00
249144	Lead	JPM3-CP7-17	3.59840	100	1	1.06	97.9	347.47	350
249144	Lead	JPM3-CP7-21	4.38330	100	1	1.11	74.3	531.48	530
249145	Lead	JPM4-LAGOON-1(1)	4.11880	100	1	1.05	93.4	420.07	420
249145	Lead	JPM4-LAGOON-1(4)	2.19160	100	1	1.08	77.0	262.93	260
249177	Lead	JPM3-ITF-AF213(2)	0.18775	100	1	1.11	71.7	23.54	24.00
249177	Lead	JPM3-ITF-AF215(2)	0.10989	100	1	1.03	69.7	15.34	15.00
249177	Lead	JPM3-ITF-AF217(2)	0.14532	100	1	1.10	67.8	19.53	20.00

Appendix N-1

Metals Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 10)

Laboratory: Severn Trent

ICP mg/kg dry weight = A * B * C/d *(% solids/100))

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Wet weight of sample

SDG	Analyte	Sample Identification	ICP/AA reading	Final Volume	Dilution Factor	Sample Weight	% solid	Recalculated Results	Reported Results
249220	Lead	JPM4-CP4	2.89980	100	1	1.14	72.6	349.14	350.00
249220	Lead	JPM4-CP5(2)	0.25278	100	1	1.31	74.9	25.82	29.00
249221	Lead	JPM4-CP31(.5)	0.18084	100	1	1.09	61.2	27.01	27
249240	Lead	JPM3-ITF-AF231(2)	1.34990	100	1	1.17	76.2	151.62	150
249398	Lead	JPM3-ITF-CP1-2(1)	3.11070	100	1	1.10	78.0	361.04	360
249398	Lead	JPM3-ITF-CP1-3(1)	3.67700	100	1	1.12	87.0	375.82	380
249398	Lead	JPM3-ITF-CP1-4(1)	0.41511	100	1	1.03	73.1	55.37	55
249398	Lead	JPM3-ITF-CP1-7(1)	13.21300	100	1	1.02	84.9	1519.83	1500
249398	Lead	JPM3-ITF-CP1-21(1)	1.50260	100	1	1.03	69.4	209.37	210
249439	Lead	JPM3-ITF-AF236(2)	1.22030	100	1	1.03	81.3	145.83	150
249510	Lead	JPM3-ITF-CP-1-22(.5)	3.58660	100	1	1.07	92.2	363.96	360
249511	Lead	JPM12-CP8(.5)	3.62590	100	1	1.07	77.9	434.36	430
249544	Lead	JPM12-AP1(1)	15.42800	100	1	1.36	65.9	1720.78	1700
249544	Lead	JPM12-AP4(1)	1.24650	100	1	1.10	78.2	145.03	150
249563	Lead	JPM12-AP11(1)	0.59162	100	1	1.13	73.6	71.15	71
249563	Lead	JPM12-AP12(1)	1.34030	100	1	1.20	74.7	149.87	150
249576	Lead	JPM12-AF5(2)	0.37371	100	1	1.05	67.1	53.27	53
249602	Lead	JPL2-ASH	6.42630	100	1	1.07	91.4	657.16	650
249616	Lead	JPM12-AP44(1)	12.17800	100	1	1.07	60.5	1879.45	1900
249623	Lead	JPM12-AP45(1)	0.99781	100	1	1.16	71.1	120.90	120
249623	Lead	JPM12-AP47(1)	0.37144	100	1	1.07	74.6	46.37	46
249674	Lead	JPM12-AP69(1)	0.43235	100	1	1.02	70.5	60.35	60
249743	Lead	JPM12-AP83(1)	0.24294	100	1	1.07	65.3	34.88	35
249754	Lead	JPM4-AF1(4)	7.90150	100	1	1.24	75.7	838.52	840
249777	Lead	JPM4-AP4(1)	1.27430	100	1	1.08	68.6	172.77	170
249777	Lead	JPM4-AF4(2)	8.02500	100	1	1.04	65.9	1173.29	1200
249777	Lead	JPM4-AF5(2)	6.32130	100	10	1.04	65.2	9285.74	9300
249944	Lead	JPM3-ITF-AP98(1)	0.32517	100	1	1.16	68.4	41.16	41
249944	Arsenic	JPM3-ITF-AF253(3)	0.06800	100	1	1.10	68.9	9.01	9.0
249944	Cadmium	JPM3-ITF-AF253(3)	0.00331	100	1	1.10	68.9	0.44	0.44
249944	Copper	JPM3-ITF-AF253(3)	0.43003	100	1	1.10	68.9	56.96	57
249944	Lead	JPM3-ITF-AF253(3)	1.24970	100	1	1.10	68.9	165.52	170
250183	Lead	JPM3-ITF-AF260(2)	0.17837	100	1	1.07	67.1	24.93	25
250224	Antimony	JPM3-ITF-AF49B(1)	0.00611	100	1	1.40	64.1	0.68	0.68 B
250224	Copper	JPM3-ITF-AF49B(1)	0.20490	100	1	1.40	64.1	22.83	23
250224	Lead	JPM3-ITF-AF49B(1)	0.33334	100	1	1.40	64.1	37.14	37
250224	Silver	JPM3-ITF-AF49B(1)	0.00206	100	1	1.40	64.1	0.23	0.23 B
250224	Zinc	JPM3-ITF-AF49B(1)	0.62911	100	1	1.40	64.1	70.09	70
250224	Antimony	JPM3-ITF-AF215B(1)	0.00844	100	1	1.49	63.1	0.90	0.90 B
250224	Barium	JPM3-ITF-AF215B(1)	1.64930	100	1	1.49	63.1	175.94	180
250224	Copper	JPM3-ITF-AF215B(1)	0.30425	100	1	1.49	63.1	32.46	32
250224	Zinc	JPM3-ITF-AF215B(1)	0.88030	100	1	1.49	63.1	93.91	94
250263	Arsenic	JPL2-AP53(1)	0.06143	100	1	1.20	79.5	6.45	6.4
250263	Cadmium	JPL2-AP53(1)	0.00518	100	1	1.20	79.5	0.54	0.54
250263	Copper	JPL2-AP53(1)	0.19412	100	1	1.20	79.5	20.38	20
250263	Lead	JPL2-AP53(1)	0.13433	100	1	1.20	79.5	14.10	14
250263	Zinc	JPL2-AP53(1)	0.67129	100	1	1.20	79.5	70.48	70
250263	Arsenic	JPL2-AP55(1)	0.06314	100	1	1.09	74.9	7.74	7.7
250263	Cadmium	JPL2-AP55(1)	0.27536	100	1	1.09	74.9	33.74	34
250263	Copper	JPL2-AP55(1)	3.76420	100	1	1.09	74.9	461.19	460
250263	Lead	JPL2-AP55(1)	1.06660	100	1	1.09	74.9	130.68	130
250263	Silver	JPL2-AP55(1)	0.20150	100	1	1.09	74.9	24.69	25
250263	Zinc	JPL2-AP55(1)	5.57900	100	1	1.09	74.9	680.96	680
250373	Arsenic	JPL2-TOTAL METAL-(PROFILE)	0.09158	100	1	1.08	84.0	10.09	10
250373	Cadmium	JPL2-TOTAL METAL-(PROFILE)	0.80536	100	1	1.08	84.0	88.77	89
250373	Copper	JPL2-TOTAL METAL-(PROFILE)	5.39640	100	5	1.09	84.0	2947.46	2900
250373	Lead	JPL2-TOTAL METAL-(PROFILE)	0.91492	100	5	1.09	84.0	499.72	500
250373	Silver	JPL2-TOTAL METAL-(PROFILE)	0.24307	100	5	1.09	84.0	132.76	130
250373	Zinc	JPL2-TOTAL METAL-(PROFILE)	5.61170	100	5	1.09	84.0	3065.06	3100
250387	Copper	JPL2-AP95(0.5)	0.87400	100	1	1.02	82.1	104.32	100
250399	Arsenic	JPL2-AF45(2)	0.22807	100	1	1.08	75.6	27.93	28
250399	Cadmium	JPL2-AF45(2)	0.01906	100	1	1.08	75.6	2.33	2.3
250399	Copper	JPL2-AF45(2)	0.71265	100	1	1.08	75.6	87	87
250399	Silver	JPL2-AF45(2)	0.00838	100	1	1.08	75.6	1.03	1
250399	Zinc	JPL2-AF45(2)	1.45190	100	1	1.08	75.6	177.79	180
250399	Lead	JPL2-AF45(2)	0.30949	100	1	1.08	75.6	37.90	38
250415	Arsenic	JPL2-AP98(0.5)	0.08369	100	1	1.06	81.0	9.75	10
250415	Cadmium	JPL2-AP98(0.5)	0.10629	100	1	1.06	81.0	12.38	12
250415	Copper	JPL2-AP98(0.5)	3.26070	100	1	1.06	81.0	379.84	380
250415	Lead	JPL2-AP98(0.5)	0.70897	100	1	1.06	81.0	82.59	83

Appendix N-1

Metals Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/kg dry weight = A * B* C/d *(% solids/100))

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Wet weight of sample

SDG	Analyte	Sample Identification	ICP/AA reading	Final Volume	Dilution Factor	Sample Weight	% solid	Recalculated Results	Reported Results
250415	Silver	JPL2-AP98(0.5)	0.03526	100	1	1.06	81.0	4.11	4.1
250415	Zinc	JPL2-AP98(0.5)	4.51170	100	1	1.06	81.0	525.57	530
250415	Arsenic	JPL2-AF48(2)	0.06187	100	1	1.01	72.8	8.45	8.4
250415	Copper	JPL2-AF48(2)	0.18910	100	1	1.01	72.8	25.82	26
250415	Lead	JPL2-AF48(2)	0.12206	100	1	1.01	72.8	16.67	17
250415	Silver	JPL2-AF48(2)	0.00232	100	1	1.01	72.8	0.32	0.32 B
250415	Zinc	JPL2-AF48(2)	0.42638	100	1	1.01	72.8	58.23	58
250418	Arsenic	JPL2-AP100(0.5)	0.07338	100	1	1.02	83.5	8.64	9
250418	Cadmium	JPL2-AP100(0.5)	0.00442	100	1	1.02	83.5	0.52	0.52
250418	Copper	JPL2-AP100(0.5)	0.31744	100	1	1.02	83.5	37.36	37
250418	Lead	JPL2-AP100(0.5)	0.18821	100	1	1.02	83.5	22.15	22
250418	Zinc	JPL2-AP100(0.5)	0.70079	100	1	1.02	83.5	82.48	82
250429	Copper	JPL2-AF51(3)-D	0.88809	100	1	1.20	73.7	100.62	100
250429	Zinc	JPL2-AF51(3)-D	1.24540	100	1	1.20	73.7	141.10	140
250431	Arsenic	JPL2-AF53(2)-D	0.11206	100	1	1.03	85.4	12.68	13
250431	Copper	JPL2-AF53(2)-D	0.40704	100	1	1.03	85.4	46.06	46
250431	Lead	JPL2-AF53(2)-D	0.17776	100	1	1.03	85.4	20.11	20
250431	Silver	JPL2-AF53(2)-D	0.00159	100	1	1.03	85.4	0.18	0.18 B
250431	Zinc	JPL2-AF53(2)-D	0.78008	100	1	1.03	85.4	88.27	88
250051	Chromium	JPL3-CP1(1)	0.14965	100	1	1.06	75.1	18.78	19
250051	Copper	JPL3-CP1(1)	0.82724	100	1	1.06	75.1	103.81	100
250051	Lead	JPL3-CP1(1)	0.91558	100	1	1.06	75.1	114.89	110
250051	Chromium	JPL3-CP9(1)	0.13413	100	1	1.08	75.0	16.63	17
250051	Copper	JPL3-CP9(1)	0.48523	100	1	1.08	75.0	60.15	60
250051	Lead	JPL3-CP9(1)	0.43822	100	1	1.08	75.0	54.32	54
250051	Copper	JPL3-CP12(1)	3.20220	100	1	1.18	60.4	448.43	450
250051	Lead	JPL3-CP12(1)	10.44000	100	1	1.18	60.4	1461.10	1500
250051	Silver	JPL3-CP12(1)	0.11416	100	1	1.18	60.4	15.98	16
250051	Zinc	JPL3-CP12(1)	8.39340	100	1	1.18	60.4	1174.67	1200
250051	Copper	JPL3-CP17(1)	5.29260	100	1	1.13	71.4	653.61	650
250051	Lead	JPL3-CP17(1)	7.86920	100	1	1.13	71.4	971.81	970
250051	Silver	JPL3-CP17(1)	0.49982	100	1	1.13	71.4	61.73	62
250051	Zinc	JPL3-CP17(1)	12.44500	100	1	1.13	71.4	1536.90	1500
250051	Copper	JPL3-CP21(1)	0.25327	100	1	1.04	73.4	33.19	33
250051	Lead	JPL3-CP21(1)	0.24076	100	1	1.04	73.4	31.55	32
250051	Silver	JPL3-CP21(1)	0.02784	100	1	1.04	73.4	3.65	4
250051	Zinc	JPL3-CP21(1)	0.80430	100	1	1.04	73.4	105.41	110
250164	Lead	JPM12-AP86(1)	1.10610	100	1	1.19	83.8	110.69	110
250165	Antimony	JPM3-ITF-AF255(2)	0.00435	100	1	1.19	73.9	0.49	0.49 B
250165	Copper	JPM3-ITF-AF255(2)	0.20344	100	1	1.19	73.9	23.10	17
250165	Silver	JPM3-ITF-AF255(2)	0.00017	100	1	1.19	73.9	0.02	23
250165	Zinc	JPM3-ITF-AF255(2)	0.57969	100	1	1.19	73.9	65.82	66
250443	Arsenic	JPL2-AP105(0.5)	0.10599	100	1	1.07	84.3	11.80	12
250443	Cadmium	JPL2-AP105(0.5)	0.00159	100	1	1.07	84.3	0.18	0.18 B
250443	Copper	JPL2-AP105(0.5)	0.27738	100	1	1.07	84.3	30.88	31
250443	Lead	JPL2-AP105(0.5)	0.15392	100	1	1.07	84.3	17.14	17
250443	Silver	JPL2-AP105(0.5)	0.00001	100	1	1.07	84.3	0.00	0.56 B
250443	Zinc	JPL2-AP105(0.5)	0.80244	100	1	1.07	84.3	89.35	89
250443	Arsenic	JPL2-AP108(0.5)	0.06423	100	1	1.05	80.9	7.59	7.6
250443	Cadmium	JPL2-AP108(0.5)	0.00170	100	1	1.05	80.9	0.20	0.20 B
250443	Copper	JPL2-AP108(0.5)	0.17585	100	1	1.05	80.9	20.79	21
250443	Lead	JPL2-AP108(0.5)	0.18635	100	1	1.05	80.9	22.03	22
250443	Silver	JPL2-AP108(0.5)	0.00178	100	1	1.05	80.9	0.21	0.21 B
250443	Zinc	JPL2-AP108(0.5)	0.47683	100	1	1.05	80.9	56.38	56
250472	Antimony	JPL23A-AF1(6)	0.00761	100	1	1.07	84.6	0.84	0.84 B
250472	Arsenic	JPL23A-AF1(6)	0.07945	100	1	1.07	84.6	8.76	9
250472	Barium	JPL23A-AF1(6)	0.45284	100	1	1.07	84.6	49.90	50
250472	Chromium	JPL23A-AF1(6)	0.16273	100	1	1.07	84.6	17.93	18
250472	Copper	JPL23A-AF1(6)	0.21622	100	1	1.07	84.6	23.83	24
250472	Lead	JPL23A-AF1(6)	0.11198	100	1	1.07	84.6	12.34	12
250472	Nickel	JPL23A-AF1(6)	0.24610	100	1	1.07	84.6	27.12	27
250472	Zinc	JPL23A-AF1(6)	0.53791	100	1	1.07	84.6	59.28	59
250472	Antimony	JPL23A-AP3(1)-D	0.01437	100	1	1.02	78.9	1.78	1.8 B
250472	Arsenic	JPL23A-AP3(1)-D	0.08744	100	1	1.02	78.9	10.82	11
250472	Barium	JPL23A-AP3(1)-D	0.93384	100	1	1.02	78.9	115.52	120
250472	Chromium	JPL23A-AP3(1)-D	0.19017	100	1	1.02	78.9	23.52	24
250472	Copper	JPL23A-AP3(1)-D	0.24991	100	1	1.02	78.9	30.91	31
250472	Lead	JPL23A-AP3(1)-D	0.37274	100	1	1.02	78.9	46.11	46
250472	Nickel	JPL23A-AP3(1)-D	0.19113	100	1	1.02	78.9	23.64	24
250472	Zinc	JPL23A-AP3(1)-D	1.02570	100	1	1.02	78.9	126.88	130

Appendix N-1

Metals Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/kg dry weight = A * B* C/d *(% solids/100))

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Wet weight of sample

SDG	Analyte	Sample Identification	ICP/AA reading	Final Volume	Dilution Factor	Sample Weight	% solid	Recalculated Results	Reported Results
250479	Arsenic	JPL23A-AP5(1)-D	0.04217	100	1	1.01	79.3	5.24	5
250479	Barium	JPL23A-AP5(1)-D	0.79805	100	1	1.01	79.3	99.19	99
250479	Chromium	JPL23A-AP5(1)-D	0.17580	100	1	1.01	79.3	21.85	22
250479	Copper	JPL23A-AP5(1)-D	0.15295	100	1	1.01	79.3	19.01	19
250479	Lead	JPL23A-AP5(1)-D	0.11232	100	1	1.01	79.3	13.96	14
250479	Nickel	JPL23A-AP5(1)-D	0.13074	100	1	1.01	79.3	16.25	16
250479	Zinc	JPL23A-AP5(1)-D	0.41861	100	1	1.01	79.3	52.03	52
250483	Antimony	JPL23A-AP9(1)	0.02053	100	1	1.14	78.9	2.29	2.3
250483	Arsenic	JPL23A-AP9(1)	0.08275	100	1	1.14	78.9	9.23	9.2
250483	Barium	JPL23A-AP9(1)	1.13060	100	1	1.14	78.9	126.14	130
250483	Chromium	JPL23A-AP9(1)	0.19660	100	1	1.14	78.9	21.93	22
250483	Copper	JPL23A-AP9(1)	0.16795	100	1	1.14	78.9	18.74	19
250483	Lead	JPL23A-AP9(1)	0.52043	100	1	1.14	78.9	58.06	58
250483	Nickel	JPL23A-AP9(1)	0.14878	100	1	1.14	78.9	16.60	17
250483	Zinc	JPL23A-AP9(1)	0.75341	100	1	1.14	78.9	84.06	84
250504	Arsenic	JPL23A-AP14(4)	0.09643	100	1	1.07	86.3	10.47	10
250504	Barium	JPL23A-AP14(4)	0.44715	100	1	1.07	86.3	48.54	49
250504	Chromium	JPL23A-AP14(4)	0.15633	100	1	1.07	86.3	16.97	17
250504	Copper	JPL23A-AP14(4)	0.21758	100	1	1.07	86.3	23.62	24
250504	Lead	JPL23A-AP14(4)	0.11568	100	1	1.07	86.3	12.56	13
250504	Nickel	JPL23A-AP14(4)	0.27056	100	1	1.07	86.3	29.37	29
250504	Zinc	JPL23A-AP14(4)	0.56601	100	1	1.07	86.3	61.44	61
250504	Arsenic	JPL23A-AF4(6)	0.07641	100	1	1.02	84.2	8.93	8.9
250504	Barium	JPL23A-AF4(6)	0.43452	100	1	1.02	84.2	50.78	51
250504	Chromium	JPL23A-AF4(6)	0.15947	100	1	1.02	84.2	18.64	19
250504	Copper	JPL23A-AF4(6)	0.18210	100	1	1.02	84.2	21.28	21
250504	Lead	JPL23A-AF4(6)	0.12329	100	1	1.02	84.2	14.41	14
250504	Nickel	JPL23A-AF4(6)	0.21198	100	1	1.02	84.2	24.77	25
250504	Zinc	JPL23A-AF4(6)	0.49175	100	1	1.02	84.2	57.47	57
250523	Arsenic	JPL23A-AP15(1)	0.09763	100	1	1.04	81.6	11.52	12
250523	Barium	JPL23A-AP15(1)	0.59642	100	1	1.04	81.6	70.39	70
250523	Chromium	JPL23A-AP15(1)	0.14251	100	1	1.04	81.6	16.82	17
250523	Copper	JPL23A-AP15(1)	0.24106	100	1	1.04	81.6	28.45	28
250523	Lead	JPL23A-AP15(1)	0.12093	100	1	1.04	81.6	14.27	14
250523	Nickel	JPL23A-AP15(1)	0.25265	100	1	1.04	81.6	29.82	30
250523	Zinc	JPL23A-AP15(1)	0.54389	100	1	1.04	81.6	64.19	64
250523	Antimony	JPL23A-AP17(1)-D	0.13704	100	1	1.14	79.3	15.10	15
250523	Barium	JPL23A-AP17(1)-D	1.40370	100	1	1.14	79.3	154.72	150
250523	Chromium	JPL23A-AP17(1)-D	0.34881	100	1	1.14	79.3	38.45	38
250523	Lead	JPL23A-AP17(1)-D	1.63120	100	1	1.14	79.3	179.79	180
250523	Zinc	JPL23A-AP17(1)-D	6.02690	100	1	1.14	79.3	664.29	660
250534	Antimony	JPL23A-AP21(1)	0.00541	100	1	1.11	83.4	0.59	0.59 B
250534	Barium	JPL23A-AP21(1)	0.91905	100	1	1.11	83.4	99.66	100
250534	Chromium	JPL23A-AP21(1)	0.13641	100	1	1.11	83.4	14.79	15
250534	Lead	JPL23A-AP21(1)	0.11511	100	1	1.11	83.4	12.48	12
250534	Zinc	JPL23A-AP21(1)	0.44610	100	1	1.11	83.4	48.38	48
250536	Antimony	JPL23A-AP26(4)	0.00639	100	1	1.06	86.3	0.70	0.70 B
250536	Barium	JPL23A-AP26(4)	0.53965	100	1	1.06	86.3	58.80	59
250536	Chromium	JPL23A-AP26(4)	0.14340	100	1	1.06	86.3	15.63	16
250536	Lead	JPL23A-AP26(4)	0.12463	100	1	1.06	86.3	13.58	14
250536	Zinc	JPL23A-AP26(4)	0.55944	100	1	1.06	86.3	60.96	61
250536	Barium	JPL23A-AF9(6)	0.42823	100	1	1.03	84.6	49.26	49
250536	Chromium	JPL23A-AF9(6)	0.14514	100	1	1.03	84.6	16.70	17
250536	Lead	JPL23A-AF9(6)	0.07772	100	1	1.03	84.6	8.94	8.9
250536	Zinc	JPL23A-AF9(6)	0.41793	100	1	1.03	84.6	48.08	48
250548	Lead	JPM12-STOCKPILE-5(0)	2.34740	100	1	1.06	51.2	434.57	430
250551	Arsenic	JPL2-AS(0.5)	0.06839	100	1	1.20	72.6	7.85	7.9
250557	Zinc	JPL23A-AP31(1)	2.33740	100	1	1.12	79.6	261.71	260
250560	Antimony	JPL23A-AF11(6)	0.00835	100	1	1.17	81.1	0.88	0.88 B
250560	Barium	JPL23A-AF11(6)	0.46326	100	1	1.17	81.1	48.94	49
250560	Chromium	JPL23A-AF11(6)	0.14805	100	1	1.17	81.1	15.64	16
250560	Lead	JPL23A-AF11(6)	0.11617	100	1	1.17	81.1	12.27	12
250560	Zinc	JPL23A-AF11(6)	0.56878	100	1	1.17	81.1	60.09	60
250573	Antimony	JPL23A-SP4(0.5)	0.04954	100	1	1.17	83.4	5.09	5.1
250573	Barium	JPL23A-SP4(0.5)	0.94858	100	1	1.17	83.4	97.55	98
250573	Chromium	JPL23A-SP4(0.5)	0.19100	100	1	1.17	83.4	19.64	20
250573	Lead	JPL23A-SP4(0.5)	1.02980	100	1	1.17	83.4	105.90	110
250573	Zinc	JPL23A-SP4(0.5)	2.61340	100	1	1.17	83.4	268.75	270
250595	Arsenic	JPL2-AP109(0.5)	0.05849	100	1	1.02	86.4	6.63	6.6
250595	Cadmium	JPL2-AP109(0.5)	0.13966	100	1	1.02	86.4	15.83	16

Appendix N-1

Metals Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/kg dry weight = A * B * C/d *(% solids/100))

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Wet weight of sample

SDG	Analyte	Sample Identification	ICP/AA reading	Final Volume	Dilution Factor	Sample Weight	% solid	Recalculated Results	Reported Results
250595	Copper	JPL2-AP109(0.5)	18.44900	100	1	1.02	86.4	2090.97	2100
250595	Lead	JPL2-AP109(0.5)	2.59040	100	1	1.02	86.4	293.59	290
250595	Silver	JPL2-AP109(0.5)	0.15392	100	1	1.02	86.4	17.44	17
250595	Zinc	JPL2-AP109(0.5)	1.51090	100	10	1.02	86.4	1712.42	1700
250597	Arsenic	JPL2-AF57(2)	0.08011	100	1	1.02	84.1	9.31	9.3
250597	Cadmium	JPL2-AF57(2)	0.00059	100	1	1.02	84.1	0.07	0.069 B
250597	Copper	JPL2-AF57(2)	0.16473	100	1	1.02	84.1	19.13	19
250597	Lead	JPL2-AF57(2)	0.14927	100	1	1.02	84.1	17.34	17
250597	Silver	JPL2-AF57(2)	0.00153	100	1	1.02	84.1	0.18	0.18 B
250597	Zinc	JPL2-AF57(2)	0.44131	100	1	1.02	84.1	51.26	51
250597	Arsenic	JPL2-AF57(2)-D	0.07762	100	1	1.03	83.9	8.96	9.0
250597	Cadmium	JPL2-AF57(2)-D	0.00079	100	1	1.03	83.9	0.09	0.090 B
250597	Copper	JPL2-AF57(2)-D	0.27504	100	1	1.03	83.9	31.74	32
250597	Lead	JPL2-AF57(2)-D	0.14784	100	1	1.03	83.9	17.06	17
250597	Zinc	JPL2-AF57(2)-D	0.48874	100	1	1.03	83.9	56.40	56
250603	Arsenic	JPL2-AP115(0.5)	0.05752	100	1	1.04	85.1	6.51	6.5
250603	Cadmium	JPL2-AP115(0.5)	0.05680	100	1	1.04	85.1	6.42	6.4
250603	Copper	JPL2-AP115(0.5)	6.80880	100	1	1.04	85.1	770.14	770
250603	Lead	JPL2-AP115(0.5)	0.66444	100	1	1.04	85.1	75.15	75
250603	Silver	JPL2-AP115(0.5)	0.00666	100	1	1.04	85.1	0.75	0.75
250603	Zinc	JPL2-AP115(0.5)	2.62020	100	1	1.04	85.1	296.37	300
250606	Arsenic	JPL2-SP4(0)	0.08453	100	1	1.03	77.9	10.51	11
250606	Cadmium	JPL2-SP4(0)	0.03177	100	1	1.03	77.9	3.95	3.9
250606	Copper	JPL2-SP4(0)	2.68730	100	1	1.03	77.9	334.17	330
250606	Lead	JPL2-SP4(0)	0.73992	100	1	1.03	77.9	92.01	92
250606	Silver	JPL2-SP4(0)	0.02608	100	1	1.03	77.9	3.24	3.2
250606	Zinc	JPL2-SP4(0)	3.53340	100	1	1.03	77.9	439.39	440
500-4287-1	Arsenic	JPL2-AP121(0.5)	0.05779	100	1	1.05	89.8	6.15	6.1
500-4287-1	Cadmium	JPL2-AP121(0.5)	0.01974	100	1	1.05	89.8	2.10	2.1
500-4287-1	Copper	JPL2-AP121(0.5)	1.92490	100	1	1.05	89.8	204.69	200
500-4287-1	Lead	JPL2-AP121(0.5)	0.33992	100	1	1.05	89.8	36.15	36
500-4287-1	Silver	JPL2-AP121(0.5)	0.00563	100	1	1.05	89.8	0.60	0.6
500-4287-1	Zinc	JPL2-AP121(0.5)	5.05990	100	1	1.05	89.8	538.07	540
500-4270-2	Arsenic	JPL2-AP117(0.5)	0.08607	100	1	1.11	85.7	9.08	9.1
500-4270-2	Cadmium	JPL2-AP117(0.5)	0.04216	100	1	1.11	85.7	4.45	4.4
500-4270-2	Copper	JPL2-AP117(0.5)	3.71970	100	1	1.11	85.7	392.26	390
500-4270-2	Lead	JPL2-AP117(0.5)	0.62480	100	1	1.11	85.7	65.89	66
500-4270-2	Silver	JPL2-AP117(0.5)	0.01738	100	1	1.11	85.7	1.83	1.8
500-4270-2	Zinc	JPL2-AP117(0.5)	4.22500	100	1	1.11	85.7	445.55	450
500-4317-4	Arsenic	JPL2-AP122(0.5)	0.13276	100	1	1.11	94.1	12.70	13
500-4317-4	Cadmium	JPL2-AP122(0.5)	0.00714	100	1	1.11	94.1	0.68	0.68
500-4317-4	Copper	JPL2-AP122(0.5)	0.83984	100	1	1.11	94.1	80.34	80
500-4317-4	Lead	JPL2-AP122(0.5)	0.23565	100	1	1.11	94.1	22.54	23
500-4317-4	Silver	JPL2-AP122(0.5)	0.00328	100	1	1.11	94.1	0.31	0.31 JB
500-4317-4	Zinc	JPL2-AP122(0.5)	1.03880	100	1	1.11	94.1	99.37	99
500-4317-4	Arsenic	JPL2-AST-TP1(0.5)	0.07027	100	1	1.02	92.4	7.46	7.5
500-4317-4	Cadmium	JPL2-AST-TP1(0.5)	0.00185	100	1	1.02	92.4	0.20	0.20 J
500-4317-4	Copper	JPL2-AST-TP1(0.5)	0.17602	100	1	1.02	92.4	18.67	19
500-4317-4	Lead	JPL2-AST-TP1(0.5)	0.11871	100	1	1.02	92.4	12.59	13
500-4317-4	Silver	JPL2-AST-TP1(0.5)	0.00044	100	1	1.02	92.4	0.05	0.53
500-4317-4	Zinc	JPL2-AST-TP1(0.5)	0.43350	100	1	1.02	92.4	45.99	46
500-4362-1	Lead	JPL2-CP93(0.5)	0.77925	100	1	1.01	85.9	89.45	89
500-4427-1	Arsenic	JPL2-AP123(0.5)	0.06566	100	1	1.09	97.0	6.23	6.2
500-4427-1	Cadmium	JPL2-AP123(0.5)	0.01359	100	1	1.09	97.0	1.29	1.3
500-4427-1	Copper	JPL2-AP123(0.5)	0.50640	100	1	1.09	97.0	48.02	48
500-4427-1	Lead	JPL2-AP123(0.5)	0.19270	100	1	1.09	97.0	18.27	18
500-4427-1	Silver	JPL2-AP123(0.5)	0.02219	100	1	1.09	97.0	2.10	2.1
500-4427-1	Zinc	JPL2-AP123(0.5)	0.77630	100	1	1.09	97.0	73.61	74 B
500-4447-1	Lead	JPL23A-SP5(1)	0.26627	100	1	1.06	82.7	30.40	30
500-4472-4	Lead	JPL2-AP125(0.5)	0.62306	100	1	1.07	85.8	67.64	68
500-4472-4	Copper	JPL2-SP11(1)	0.24756	100	1	1.02	81.3	29.97	30
500-4472-4	Lead	JPL2-SP11(1)	0.18363	100	1	1.02	81.3	22.23	22
500-4561-1	Arsenic	JPL2-AP129(1)	0.11014	100	1	1.12	85.7	11.48	11
500-4561-1	Cadmium	JPL2-AP129(1)	0.01400	100	1	1.12	85.7	1.46	1.5
500-4561-1	Copper	JPL2-AP129(1)	3.18040	100	1	1.12	85.7	331.49	330
500-4561-1	Lead	JPL2-AP129(1)	0.41013	100	1	1.12	85.7	42.75	43
500-4561-1	Silver	JPL2-AP129(1)	0.65010	100	1	1.12	85.7	67.76	68
500-4561-1	Zinc	JPL2-AP129(1)	8.50560	100	1	1.12	85.7	886.54	890
500-4561-1	Arsenic	JPL2-AF62(10)	0.10710	100	1	1.16	81.6	11.35	11
500-4561-1	Cadmium	JPL2-AF62(10)	0.02548	100	1	1.16	81.6	2.70	2.7

Appendix N-1

Metals Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/kg dry weight = A * B * C/d *(% solids/100))

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Wet weight of sample

SDG	Analyte	Sample Identification	ICP/AA reading	Final Volume	Dilution Factor	Sample Weight	% solid	Recalculated Results	Reported Results
500-4561-1	Copper	JPL2-AF62(10)	1.24750	100	1	1.16	81.6	132.16	130
500-4561-1	Lead	JPL2-AF62(10)	0.52473	100	1	1.16	81.6	55.59	56
500-4561-1	Silver	JPL2-AF62(10)	0.27009	100	1	1.16	81.6	28.61	29
500-4561-1	Zinc	JPL2-AF62(10)	6.43860	100	1	1.16	81.6	682.09	680
500-4599-2	Lead	JPWR367-2W-1	0.20399	100	1	1.09	74.0	25.30	25
500-4599-2	Lead	JPWR367-2W-7	0.25136	100	1	1.04	74.0	32.59	33
500-4599-2	Lead	JPWR367-2W-11	0.19952	100	1	1.03	68.0	28.51	29
500-4602-2	Lead	JPWR368-2E-1	0.17225	100	1	1.01	64.2	26.50	26
500-4602-2	Lead	JPWR368-2E-8	0.20424	100	1	1.02	70.5	28.47	28
500-4602-2	Lead	JPWR368-2E-16	0.49154	100	1	1.13	80.7	53.83	54
500-4630-1	Arsenic	JPL2-SP12(0.5)	0.10550	100	1	1.07	92.9	10.64	11
500-4630-1	Cadmium	JPL2-SP12(0.5)	0.06307	100	1	1.07	92.9	6.36	6.4
500-4630-1	Copper	JPL2-SP12(0.5)	29.26100	100	1	1.07	92.9	2952.23	3000
500-4630-1	Lead	JPL2-SP12(0.5)	1.32510	100	1	1.07	92.9	133.69	130
500-4630-1	Silver	JPL2-SP12(0.5)	1.36560	100	1	1.07	92.9	137.78	140
500-4630-1	Zinc	JPL2-SP12(0.5)	7.99250	100	1	1.07	92.9	806.39	810
500-4661-2	Lead	JPWR-369-1W-1	0.34963	100	1	1.05	58.9	56.65	57
500-4661-2	Lead	JPWR-369-1W-7	0.18355	100	1	1.01	66.8	27.30	27
500-4661-2	Lead	JPWR-369-1W-14-D	0.13607	100	1	1.07	70.8	17.93	18
500-4662-2	Lead	JPWR370-1E-2	0.17612	100	1	1.11	73.8	21.58	22
500-4662-2	Lead	JPWR370-1E-8	0.10094	100	1	1.10	55.1	16.68	17
500-4662-2	Lead	JPWR370-1E-16	0.17897	100	1	1.06	76.8	21.94	22
500-4685-1	Copper	JPL5-AP1(0.5)	1.76400	100	1	1.03	92.5	185.63	190
500-4685-1	Lead	JPL5-AP1(0.5)	1.05200	100	1	1.03	92.5	110.71	110
500-4685-1	Zinc	JPL5-AP1(0.5)	3.17250	100	1	1.03	92.5	333.86	330
500-4685-1	Copper	JPL5-AF2(1)	0.26285	100	1	1.04	84.7	29.92	30
500-4685-1	Lead	JPL5-AF2(1)	0.13698	100	1	1.04	84.7	15.59	16
500-4685-1	Zinc	JPL5-AF2(1)	0.69190	100	1	1.04	84.7	78.76	79
500-4792-2	Lead	JPL5-AP1(0.5)	0.30917	100	1	1.02	94.8	31.96	32
500-4792-2	Lead	JPL5-AP3(0.5)	0.17833	100	1	1.11	85.8	18.69	19
500-4814-1	Lead	JPM4-AF4(1)	0.14155	100	1	1.05	72.3	18.67	19
500-4814-1	Lead	JPM4-AP5(0.5)	0.13637	100	1	1.09	73.2	17.12	17
500-4870-1	Lead	JPL5-AF5(3)	0.21503	100	1	1.03	83.4	24.92	25
500-4870-1	Lead	JPL5-AP6(0.5)	0.21625	100	1	1.06	92.2	22.10	22
500-4954-1	Lead	JPL5-1(3)	0.13882	100	1	1.06	87.5	14.99	15
500-4954-1	Lead	JPL5-7(3)	0.12068	100	1	1.03	84.9	13.75	14
500-4954-1	Lead	JPL5-12(3)	0.21293	100	1	1.10	86.5	22.42	22
500-5122-1	Lead	JPM4-AF7(1)	7.44220	100	25	1.08	68.7	25087.76	25000
500-5265-1	Arsenic	JPL5-PCN-4(3)	0.11046	100	1	1.02	93.6	11.62	12
500-5265-1	Copper	JPL5-PCN-4(3)	0.36286	100	1	1.02	93.6	38.16	38
500-5265-1	Lead	JPL5-PCN-4(3)	0.26482	100	1	1.02	93.6	27.85	28
500-5265-1	Thallium	JPL5-PCN-4(3)	0.00628	100	1	1.02	93.6	0.66	0.66
500-5265-1	Zinc	JPL5-PCN-4(3)	1.24670	100	1	1.02	93.6	131.11	130
500-5265-1	Arsenic	JPL5-PCN-10(3)	0.26183	100	1	1.14	95.5	24.03	24
500-5265-1	Copper	JPL5-PCN-10(3)	4.99390	100	1	1.14	95.5	458.30	460
500-5265-1	Lead	JPL5-PCN-10(3)	4.66030	100	1	1.14	95.5	427.69	430
500-5265-1	Thallium	JPL5-PCN-10(3)	0.00491	100	1	1.14	95.5	0.45	0.45 J
500-5265-1	Zinc	JPL5-PCN-10(3)	8.68460	100	1	1.14	95.5	797.00	800
500-5285-1	Lead	JPL5-PCN-11(3)	0.13772	100	1	1.03	93.7	14.25	14
500-5285-1	Lead	JPL5-PCN-18(3)	0.15945	100	1	1.07	92.6	16.16	16
500-5285-1	Lead	JPL5-PCN-25(3)	0.24133	100	1	1.19	94.9	21.32	21
500-5286-1	Lead	JPM4-AP15(0.5)	1.63960	100	100	1.09	70.6	21372.90	21000
500-5286-1	Lead	JPM4-AP19(0.5)	0.38453	100	1	1.17	85.2	38.72	39
500-5306-1	Lead	JPL5-14(3)	0.12535	100	1	1.02	84.5	14.49	14
500-5347-1	Arsenic	JPL3-DITCH-1(0)	0.17767	100	1	1.17	82.3	18.45	18
500-5352-1	Lead	JPL3-BARREL-White Substance	0.10952	100	1	1.01	50.7	21.40	11
500-5499-1	Antimony	JPL5-AP10(0.5)	0.01491	100	1	1.12	86.0	1.54	1.5 J
500-5499-1	Arsenic	JPL5-AP10(0.5)	0.13381	100	1	1.12	86.0	13.86	14
500-5499-1	Cadmium	JPL5-AP10(0.5)	0.03516	100	1	1.12	86.0	3.64	3.6
500-5499-1	Copper	JPL5-AP10(0.5)	0.60951	100	1	1.12	86.0	63.12	63
500-5499-1	Lead	JPL5-AP10(0.5)	0.56635	100	1	1.12	86.0	58.65	59
500-5499-1	Silver	JPL5-AP10(0.5)	0.00391	100	1	1.12	86.0	0.40	0.4 J
500-5499-1	Thallium	JPL5-AP10(0.5)	0.00873	100	1	1.12	86.0	0.90	0.9 J
500-5499-1	Zinc	JPL5-AP10(0.5)	3.70190	100	1	1.12	86.0	383.38	380 B
500-5499-1	Antimony	JPL5-AP14(0.5)	0.00935	100	1	1.04	88.9	1.02	1.0 J
500-5499-1	Arsenic	JPL5-AP14(0.5)	0.05272	100	1	1.04	88.9	5.73	5.7
500-5499-1	Cadmium	JPL5-AP14(0.5)	0.00801	100	1	1.04	88.9	0.87	0.87
500-5499-1	Copper	JPL5-AP14(0.5)	0.25671	100	1	1.04	88.9	27.88	28
500-5499-1	Lead	JPL5-AP14(0.5)	0.14756	100	1	1.04	88.9	16.03	16
500-5499-1	Silver	JPL5-AP14(0.5)	0.00035	100	1	1.04	88.9	0.04	<0.54

Appendix N-1

Metals Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/kg dry weight = A * B * C/d *(% solids/100))

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Wet weight of sample

SDG	Analyte	Sample Identification	ICP/AA reading	Final Volume	Dilution Factor	Sample Weight	% solid	Recalculated Results	Reported Results
500-5499-1	Thallium	JPL5-AP14(0.5)	0.00445	100	1	1.04	88.9	0.48	<1.1
500-5499-1	Zinc	JPL5-AP14(0.5)	0.61778	100	1	1.04	88.9	67.10	68
500-5499-1	Antimony	JPL5-AP19(0.5)	-0.00017	100	1	1.02	89.8	-0.02	<2.2
500-5499-1	Arsenic	JPL5-AP19(0.5)	0.09171	100	1	1.02	89.8	9.97	10
500-5499-1	Cadmium	JPL5-AP19(0.5)	0.00021	100	1	1.02	89.8	0.02	<0.22
500-5499-1	Copper	JPL5-AP19(0.5)	0.13103	100	1	1.02	89.8	14.25	14
500-5499-1	Lead	JPL5-AP19(0.5)	0.11899	100	1	1.02	89.8	12.94	13
500-5499-1	Silver	JPL5-AP19(0.5)	-0.00103	100	1	1.02	89.8	-0.11	<0.54
500-5499-1	Thallium	JPL5-AP19(0.5)	0.00558	100	1	1.02	89.8	0.61	0.61 J
500-5499-1	Zinc	JPL5-AP19(0.5)	0.41397	100	1	1.02	89.8	45.02	45
500-5499-1	Antimony	JPL5-AP24(0.5)	0.00386	100	1	1.03	94.0	0.40	<2.1
500-5499-1	Arsenic	JPL5-AP24(0.5)	0.07197	100	1	1.03	94.0	7.40	7.4
500-5499-1	Cadmium	JPL5-AP24(0.5)	0.00194	100	1	1.03	94.0	0.20	0.20 J
500-5499-1	Copper	JPL5-AP24(0.5)	0.15238	100	1	1.03	94.0	15.66	16
500-5499-1	Lead	JPL5-AP24(0.5)	0.15480	100	1	1.03	94.0	15.91	16
500-5499-1	Silver	JPL5-AP24(0.5)	-0.00000	100	1	1.03	94.0	0.00	<0.51
500-5499-1	Thallium	JPL5-AP24(0.5)	0.01329	100	1	1.03	94.0	1.37	1.4
500-5499-1	Zinc	JPL5-AP24(0.5)	0.47931	100	1	1.03	94.0	49.27	49 B
500-5499-1	Antimony	JPL5-AP28(0.5)	0.00266	100	1	1.01	88.6	0.30	<2.2
500-5499-1	Arsenic	JPL5-AP28(0.5)	0.05570	100	1	1.01	88.6	6.25	6.2
500-5499-1	Cadmium	JPL5-AP28(0.5)	0.01198	100	1	1.01	88.6	1.34	1.3
500-5499-1	Copper	JPL5-AP28(0.5)	0.17560	100	1	1.01	88.6	19.69	20
500-5499-1	Lead	JPL5-AP28(0.5)	0.19788	100	1	1.01	88.6	22.19	22
500-5499-1	Silver	JPL5-AP28(0.5)	-0.00015	100	1	1.01	88.6	-0.02	<0.56
500-5499-1	Thallium	JPL5-AP28(0.5)	0.01175	100	1	1.01	88.6	1.32	1.3
500-5499-1	Zinc	JPL5-AP28(0.5)	0.59230	100	1	1.01	88.6	66.41	66 B
500-5501-1	Antimony	JPL5-AP34(0.5)	0.00670	100	1	1.04	94.3	0.68	0.68 J
500-5501-1	Arsenic	JPL5-AP34(0.5)	0.06475	100	1	1.04	94.3	6.59	6.6
500-5501-1	Cadmium	JPL5-AP34(0.5)	0.00203	100	1	1.04	94.3	0.21	0.21
500-5501-1	Copper	JPL5-AP34(0.5)	0.13133	100	1	1.04	94.3	13.36	13
500-5501-1	Lead	JPL5-AP34(0.5)	0.14330	100	1	1.04	94.3	14.58	15
500-5501-1	Silver	JPL5-AP34(0.5)	-0.00057	100	1	1.04	94.3	-0.06	<0.51
500-5501-1	Thallium	JPL5-AP34(0.5)	0.01013	100	1	1.04	94.3	1.03	1.0
500-5501-1	Zinc	JPL5-AP34(0.5)	0.44899	100	1	1.04	94.3	45.68	46 B
500-5501-1	Antimony	JPL5-AF9(3)	0.00716	100	1	1.01	92.0	0.77	0.77 J
500-5501-1	Arsenic	JPL5-AF9(3)	0.11584	100	1	1.01	92.0	12.48	12
500-5501-1	Cadmium	JPL5-AF9(3)	0.00578	100	1	1.01	92.0	0.62	0.62
500-5501-1	Copper	JPL5-AF9(3)	0.23545	100	1	1.01	92.0	25.37	25
500-5501-1	Lead	JPL5-AF9(3)	0.15188	100	1	1.01	92.0	16.37	16
500-5501-1	Silver	JPL5-AF9(3)	-0.00006	100	1	1.01	92.0	-0.01	<0.54
500-5501-1	Thallium	JPL5-AF9(3)	0.01039	100	1	1.01	92.0	1.12	1.1
500-5501-1	Zinc	JPL5-AF9(3)	0.73030	100	1	1.01	92.0	78.70	79 B
500-5501-1	Antimony	JPL5-AF15(3)	0.00902	100	1	1.04	92.8	0.93	0.93 J
500-5501-1	Arsenic	JPL5-AF15(3)	0.10429	100	1	1.04	92.8	10.78	11
500-5501-1	Cadmium	JPL5-AF15(3)	0.00446	100	1	1.04	92.8	0.46	0.46
500-5501-1	Copper	JPL5-AF15(3)	0.23943	100	1	1.04	92.8	24.74	25
500-5501-1	Lead	JPL5-AF15(3)	0.16536	100	1	1.04	92.8	17.09	17
500-5501-1	Silver	JPL5-AF15(3)	0.00017	100	1	1.04	92.8	0.02	<0.52
500-5501-1	Thallium	JPL5-AF15(3)	0.00502	100	1	1.04	92.8	0.52	0.52 J
500-5501-1	Zinc	JPL5-AF15(3)	0.63751	100	1	1.04	92.8	65.88	66 B
500-5501-1	Antimony	JPL5-AF21(3)	0.01380	100	1	1.11	97.4	1.28	1.3 J
500-5501-1	Arsenic	JPL5-AF21(3)	0.80073	100	1	1.11	97.4	74.02	74
500-5501-1	Cadmium	JPL5-AF21(3)	0.00590	100	1	1.11	97.4	0.55	0.55
500-5501-1	Copper	JPL5-AF21(3)	0.32388	100	1	1.11	97.4	29.94	30
500-5501-1	Lead	JPL5-AF21(3)	0.21811	100	1	1.11	97.4	20.16	20
500-5501-1	Silver	JPL5-AF21(3)	0.00120	100	1	1.11	97.4	0.11	0.11 J
500-5501-1	Thallium	JPL5-AF21(3)	0.00747	100	1	1.11	97.4	0.69	0.69 J
500-5501-1	Zinc	JPL5-AF21(3)	0.46751	100	1	1.11	97.4	43.22	43 B
500-5658-1	Lead	JPM4-AF9(4)	0.79202	100	1	1.11	71.2	99.85	100
500-5681-1	Arsenic	JPL3-BLAST PIT(2)	0.13726	100	1	1.05	88.3	14.77	15 J
500-5681-1	Barium	JPL3-BLAST PIT(2)	0.90808	100	1	1.05	88.3	97.71	98
500-5681-1	Chromium	JPL3-BLAST PIT(2)	0.16766	100	1	1.05	88.3	18.04	18
500-5681-1	Copper	JPL3-BLAST PIT(2)	6.60970	100	1	1.05	88.3	711.21	710
500-5681-1	Lead	JPL3-BLAST PIT(2)	9.81960	100	1	1.05	88.3	1056.60	1100
500-5681-1	Silver	JPL3-BLAST PIT(2)	0.00483	100	1	1.05	88.3	0.52	0.52
500-5681-1	Zinc	JPL3-BLAST PIT(2)	0.80790	100	1	1.05	88.3	86.93	87
500-5719-1	Arsenic	JPL3-STOCKPILE-1(0)	0.04777	100	1	1.08	99.2	4.44	4.4
500-5719-1	Barium	JPL3-STOCKPILE-1(0)	0.65367	100	1	1.08	99.2	60.74	61
500-5719-1	Chromium	JPL3-STOCKPILE-1(0)	0.14606	100	1	1.08	99.2	13.57	14
500-5719-1	Copper	JPL3-STOCKPILE-1(0)	2.21000	100	1	1.08	99.2	205.37	210

Appendix N-1

Metals Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/kg dry weight = A * B * C/d *(% solids/100))

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Wet weight of sample

SDG	Analyte	Sample Identification	ICP/AA reading	Final Volume	Dilution Factor	Sample Weight	% solid	Recalculated Results	Reported Results
500-5719-1	Lead	JPL3-STOCKPILE-1(0)	2.94190	100	1	1.08	99.2	273.38	270
500-5719-1	Silver	JPL3-STOCKPILE-1(0)	0.02014	100	1	1.08	99.2	1.87	1.9
500-5719-1	Zinc	JPL3-STOCKPILE-1(0)	2.75450	100	1	1.08	99.2	255.97	260 B
500-5720-1	Lead	JPM4-SEDIMENT-8/2	0.14008	100	1	1.12	74.8	16.65	17
500-5767-1	Lead	JPM4-AP23(0.5)	0.89063	100	1	1.04	88.1	96.99	97 B
500-5767-1	Lead	JPM4-AP27(0.5)	10.21200	100	1	1.08	87.8	1078.84	1100 B
500-5767-1	Lead	JPM4-AP30(2)	0.96021	100	1	1.03	93.9	99.11	99 B
500-5933-1	Arsenic	JPL5-PCN2-1(5)	0.11848	100	1	1.15	72.0	14.26	14
500-5933-1	Copper	JPL5-PCN2-1(5)	0.32293	100	1	1.15	72.0	38.87	39 B
500-5933-1	Lead	JPL5-PCN2-1(5)	0.15541	100	1	1.15	72.0	18.71	19
500-5933-1	Thallium	JPL5-PCN2-1(5)	0.01848	100	1	1.15	72.0	2.22	2.2
500-5933-1	Zinc	JPL5-PCN2-1(5)	0.66550	100	1	1.15	72.0	80.11	80 VB
500-5933-1	Arsenic	JPL5-PCN2-5(5)	0.09710	100	1	1.02	71.1	13.39	13
500-5933-1	Copper	JPL5-PCN2-5(5)	0.22997	100	1	1.02	71.1	31.71	32 B
500-5933-1	Lead	JPL5-PCN2-5(5)	0.11431	100	1	1.02	71.1	15.76	16
500-5933-1	Thallium	JPL5-PCN2-5(5)	0.01637	100	1	1.02	71.1	2.26	2.3
500-5933-1	Zinc	JPL5-PCN2-5(5)	0.57756	100	1	1.02	71.1	79.64	80 B
500-5954-1	Lead	JPL5-PCN2-11(5)	0.14214	100	1	1.03	89.9	15.32	15
500-5954-1	Lead	JPL5-PCN2-15(5)	0.10509	100	1	1.02	89.1	11.59	12
500-5954-1	Lead	JPL5-PCN2-20(5)	0.10523	100	1	1.03	86.0	11.90	12
500-5954-1	Lead	JPL5-PCN2-24(5)	0.16231	100	1	1.06	87.6	17.55	18
500-5975-1	Lead	JPM4-AP32(0.5)	2.46860	100	1	1.17	69.8	302.69	300
500-5975-1	Lead	JPM4-AP36(0.5)	0.13458	100	1	1.01	78.3	17.04	17
500-5975-1	Lead	JPM4-AP41(0.5)	0.75753	100	1	1.03	87.2	84.74	85
500-5975-1	Lead	JPM4-AP47(0.5)	0.14697	100	1	1.07	75.4	18.26	18
500-6015-1	Lead	JPL5-AP1(0.5)	0.33621	100	1	1.02	95.3	34.66	35
500-6017-1	Lead	JPL5-AP37(0.5)	0.16406	100	1	1.05	81.6	19.11	19
500-6018-1	Arsenic	JPL5-AF24(4)	0.37628	100	1	1.12	82.5	40.69	41
500-6078-1	Arsenic	JPL5-AP41(0.5)	0.09493	100	1	1.11	80.5	10.62	11
500-6079-1	Copper	JPL2-SP17(1)	0.13479	100	1	1.02	82.7	16.04	16
500-6079-1	Lead	JPL2-SP17(1)	0.14568	100	1	1.02	82.7	17.34	17
500-6079-1	Silver	JPL2-SP17(1)	0.00204	100	1	1.02	82.7	0.24	0.24 J
500-6079-1	Zinc	JPL2-SP17(1)	0.46353	100	1	1.02	82.7	55.17	55
500-6111-1	Lead	JPM4-AP50(0.5)	41.71800	100	1	1.03	83.7	4821.74	4800
500-6111-1	Lead	JPM4-AP57(0.5)	3.66340	100	1	1.03	74.5	475.93	480
500-6133-1	Copper	JPL2-AP137(0.5)	5.52970	100	1	1.01	85.9	634.47	630
500-6133-1	Zinc	JPL2-AP137(0.5)	7.29210	100	1	1.01	85.9	836.69	840
500-6237-1	Arsenic	JPL5-AF27(5)	0.16920	100	1	1.02	75.2	22.00	22
500-6262-1	Copper	JPL2-AP147(0.5)	0.22417	100	1	1.00	77.9	28.70	29
500-6262-1	Zinc	JPL2-AP147(0.5)	0.56438	100	1	1.00	77.9	72.25	72
500-6238-1	Arsenic	JPL2-AP139(1)	0.12610	100	1	1.00	83.0	15.15	15
500-6238-1	Copper	JPL2-AP139(1)	0.29951	100	1	1.00	83.0	35.98	36
500-6238-1	Lead	JPL2-AP139(1)	0.17167	100	1	1.00	83.0	20.62	21
500-6238-1	Silver	JPL2-AP139(1)	0.00377	100	1	1.00	83.0	0.45	0.45 J
500-6238-1	Zinc	JPL2-AP139(1)	0.71537	100	1	1.00	83.0	85.94	86
500-6238-1	Arsenic	JPL2-AP142(8)	0.08977	100	1	1.03	86.9	10.07	10
500-6238-1	Copper	JPL2-AP142(8)	0.19787	100	1	1.03	86.9	22.20	22
500-6238-1	Lead	JPL2-AP142(8)	0.11239	100	1	1.03	86.9	12.61	13
500-6238-1	Silver	JPL2-AP142(8)	0.00184	100	1	1.03	86.9	0.21	0.21 J
500-6238-1	Zinc	JPL2-AP142(8)	0.51066	100	1	1.03	86.9	57.29	57
500-6592-1	Arsenic	JPL3-AP12(1)	0.17216	100	1	1.05	92.3	17.74	18
500-6592-1	Barium	JPL3-AP12(1)	4.12470	100	1	1.05	92.3	425.11	430
500-6592-1	Chromium	JPL3-AP12(1)	0.24923	100	1	1.05	92.3	25.69	26 V
500-6592-1	Copper	JPL3-AP12(1)	2.19610	100	1	1.05	92.3	226.34	260 B
500-6592-1	Lead	JPL3-AP12(1)	1.84130	100	1	1.05	92.3	189.77	190 V
500-6592-1	Silver	JPL3-AP12(1)	0.00820	100	1	1.05	92.3	0.85	0.84
500-6592-1	Zinc	JPL3-AP12(1)	6.90430	100	1	1.05	92.3	711.59	710 VB
500-6592-1	Arsenic	JPL3-AP17(1)	0.15245	100	1	1.08	90.5	15.59	16
500-6592-1	Barium	JPL3-AP17(1)	6.87390	100	1	1.08	90.5	702.83	700
500-6592-1	Chromium	JPL3-AP17(1)	0.43151	100	1	1.08	90.5	44.12	44
500-6592-1	Copper	JPL3-AP17(1)	30.151	100	1	1.08	90.5	3082.82	3100 B
500-6592-1	Lead	JPL3-AP17(1)	8.78510	100	1	1.08	90.5	898.24	900
500-6592-1	Silver	JPL3-AP17(1)	0.02781	100	1	1.08	90.5	2.84	2.8
500-6592-1	Zinc	JPL3-AP17(1)	14.40400	100	1	1.08	90.5	1472.75	1500 B
500-6592-1	Arsenic	JPL3-AF10(1)	0.13122	100	1	1.06	85.6	14.51	15
500-6592-1	Barium	JPL3-AF10(1)	0.86422	100	1	1.06	85.6	95.57	96
500-6592-1	Chromium	JPL3-AF10(1)	0.19971	100	1	1.06	85.6	22.09	22
500-6592-1	Copper	JPL3-AF10(1)	0.30795	100	1	1.06	85.6	34.05	34 B
500-6592-1	Lead	JPL3-AF10(1)	0.17407	100	1	1.06	85.6	19.25	19
500-6592-1	Silver	JPL3-AF10(1)	0.00144	100	1	1.06	85.6	0.16	0.16 J

Appendix N-1

Metals Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/kg dry weight = A * B * C/d *(% solids/100))

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Wet weight of sample

SDG	Analyte	Sample Identification	ICP/AA reading	Final Volume	Dilution Factor	Sample Weight	% solid	Recalculated Results	Reported Results
500-6592-1	Zinc	JPL3-AF10(1)	0.93268	100	1	1.06	85.6	103.14	100 B
500-6592-1	Arsenic	JPL3-AF16(1)	0.18245	100	1	1.14	85.7	18.63	19
500-6592-1	Barium	JPL3-AF16(1)	5.03410	100	1	1.14	85.7	514.05	510
500-6592-1	Chromium	JPL3-AF16(1)	0.28839	100	1	1.14	85.7	29.45	29
500-6592-1	Copper	JPL3-AF16(1)	4.4280	100	1	1.14	85.7	452.16	450 B
500-6592-1	Lead	JPL3-AF16(1)	2.89600	100	1	1.14	85.7	295.72	300
500-6592-1	Silver	JPL3-AF16(1)	0.01361	100	1	1.14	85.7	1.39	1.4
500-6592-1	Zinc	JPL3-AF16(1)	17.09100	100	1	1.14	85.7	1745.24	1700 B
500-6112-1	Antimony	JPL5-SP1(1)	0.00761	100	1	1.12	68.1	1.00	1 J
500-6112-1	Arsenic	JPL5-SP1(1)	0.07938	100	1	1.12	68.1	10.39	10
500-6112-1	Cadmium	JPL5-SP1(1)	0.00424	100	1	1.12	68.1	0.56	0.6
500-6112-1	Copper	JPL5-SP1(1)	0.16551	100	1	1.12	68.1	21.67	22
500-6112-1	Lead	JPL5-SP1(1)	0.21513	100	1	1.12	68.1	28.16	28 V
500-6112-1	Silver	JPL5-SP1(1)	0.00106	100	1	1.12	68.1	0.14	0.14 J
500-6112-1	Thallium	JPL5-SP1(1)	-0.00642	100	1	1.12	68.1	-0.84	<1.3
500-6112-1	Zinc	JPL5-SP1(1)	0.59467	100	1	1.12	68.1	77.85	78 VB
500-6332-1	Antimony	JPL5-AP42(0.5)	0.03303	100	1	1.18	84.3	3.32	3.3
500-6332-1	Arsenic	JPL5-AP42(0.5)	0.16530	100	1	1.18	84.3	16.63	17
500-6332-1	Cadmium	JPL5-AP42(0.5)	0.10967	100	1	1.18	84.3	11.03	11
500-6332-1	Copper	JPL5-AP42(0.5)	10.03600	100	1	1.18	84.3	1009.68	1000 B
500-6332-1	Lead	JPL5-AP42(0.5)	2.98230	100	1	1.18	84.3	300.04	300 V
500-6332-1	Silver	JPL5-AP42(0.5)	0.01334	100	1	1.18	84.3	1.34	1.3
500-6332-1	Thallium	JPL5-AP42(0.5)	-0.00264	100	1	1.18	84.3	-0.27	<1.0
500-6332-1	Zinc	JPL5-AP42(0.5)	19.44300	100	1	1.18	84.3	1956.07	2000 VB
500-6332-1	Antimony	JPL5-AF28(2)	0.00364	100	1	7.08	81.9	0.06	<2.3
500-6332-1	Arsenic	JPL5-AF28(2)	0.11912	100	1	7.08	81.9	2.05	13
500-6332-1	Cadmium	JPL5-AF28(2)	0.00065	100	1	7.08	81.9	0.01	0.072 J
500-6332-1	Copper	JPL5-AF28(2)	0.22945	100	1	7.08	81.9	3.96	26 B
500-6332-1	Lead	JPL5-AF28(2)	0.13912	100	1	7.08	81.9	2.40	16
500-6332-1	Silver	JPL5-AF28(2)	0.00057	100	1	7.08	81.9	0.01	<0.56
500-6332-1	Thallium	JPL5-AF28(2)	-0.00293	100	1	7.08	81.9	-0.05	<1.1
500-6332-1	Zinc	JPL5-AF28(2)	0.66269	100	1	7.08	81.9	11.42	75 B
500-6332-1	Arsenic	JPL5-AP30(6)	0.09030	100	1	1.14	85.3	9.27	9.3
500-6412-1	Lead	JPM4-AP60(0.5)	24.12900	100	1	1.04	90.4	2558.11	2600
500-6444-1	Arsenic	JPL5-AF31(3)	0.12234	100	1	1.09	81.4	13.73	14
500-6444-1	Copper	JPL5-AF31(3)	0.26799	100	1	1.09	81.4	30.09	30
500-6444-1	Lead	JPL5-AF31(3)	0.12358	100	1	1.09	81.4	13.87	14
500-6444-1	Zinc	JPL5-AF31(3)	0.63669	100	1	1.09	81.4	71.48	71
500-6467-1	Arsenic	JPL5-AP48(0.5)	0.06759	100	1	1.06	80.2	7.98	8.0
500-6467-1	Copper	JPL5-AP48(0.5)	0.14125	100	1	1.06	80.2	16.69	17
500-6467-1	Lead	JPL5-AP48(0.5)	0.16266	100	1	1.06	80.2	19.22	19
500-6467-1	Zinc	JPL5-AP48(0.5)	0.44252	100	1	1.06	80.2	52.28	52
500-6503-1	Lead	JPM4-AP63(0.5)	8.55390	100	1	1.06	90.0	893.43	890
500-6506-1	Copper	JPL3-AP1(0.5)	1.43490	100	1	1.11	90.5	142.25	140
500-6506-1	Lead	JPL3-AP1(0.5)	0.92800	100	1	1.11	90.5	92.00	92 B
500-6506-1	Silver	JPL3-AP1(0.5)	0.07953	100	1	1.11	90.5	7.88	7.9
500-6506-1	Zinc	JPL3-AP1(0.5)	2.39320	100	1	1.11	90.5	237.25	240 B
500-6506-1	Copper	JPL3-AP3(0.5)	0.36770	100	1	1.00	85.7	42.83	43
500-6506-1	Lead	JPL3-AP3(0.5)	0.16815	100	1	1.00	85.7	19.59	20 B
500-6506-1	Silver	JPL3-AP3(0.5)	0.00177	100	1	1.00	85.7	0.21	0.21 J
500-6506-1	Zinc	JPL3-AP3(0.5)	0.86904	100	1	1.00	85.7	101.22	100 B
500-6506-1	Copper	JPL3-AP11(0.5)	3.69600	100	1	1.06	93.8	370.85	370
500-6506-1	Lead	JPL3-AP11(0.5)	2.65080	100	1	1.06	93.8	265.98	270 B
500-6506-1	Silver	JPL3-AP11(0.5)	0.05520	100	1	1.06	93.8	5.54	5.5
500-6506-1	Zinc	JPL3-AP11(0.5)	5.78940	100	1	1.06	93.8	580.90	580 B
500-6506-1	Copper	JPL3-AF4(2)	0.29261	100	1	1.01	80.5	36.09	36
500-6506-1	Lead	JPL3-AF4(2)	0.21811	100	1	1.01	80.5	26.90	27 B
500-6506-1	Silver	JPL3-AF4(2)	0.01040	100	1	1.01	80.5	1.28	1.3
500-6506-1	Zinc	JPL3-AF4(2)	0.59290	100	1	1.01	80.5	73.12	73 B
500-6513-1	Copper	JPL5-AP51(0.5)	0.43905	100	1	1.01	83.6	51.96	52
500-6550-1	Arsenic	JPL5-AP52(0.5)	0.09611	100	1	1.15	93.4	8.93	8.9
500-6621-1	Lead	JPM4-POST-SB2	0.15090	100	1	1.08	84.8	16.50	16
500-6622-1	Lead	JPL5-AF1(2)	0.13679	100	1	1.03	73.0	18.20	18
500-6622-1	Chromium	JPL5-CR-AP2(0.5)	0.24183	100	1	1.14	72.2	29.43	29
500-6650-1	Chromium	JPL3-AP24(0.5)	0.18391	100	1	1.05	82.9	21.14	21
500-6650-1	Copper	JPL3-AP24(0.5)	1.24820	100	1	1.05	82.9	143.51	140
500-6650-1	Lead	JPL3-AP24(0.5)	1.63150	100	1	1.05	82.9	187.57	190
500-6650-1	Chromium	JPL3-AP29(0.5)	0.11299	100	1	1.05	84.0	12.82	13
500-6650-1	Copper	JPL3-AP29(0.5)	0.34685	100	1	1.05	84.0	39.35	39
500-6650-1	Lead	JPL3-AP29(0.5)	0.22753	100	1	1.05	84.0	25.81	26

Appendix N-1

Metals Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

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Laboratory: Severn Trent

ICP mg/kg dry weight = A * B * C/d *(% solids/100))

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Wet weight of sample

SDG	Analyte	Sample Identification	ICP/AA reading	Final Volume	Dilution Factor	Sample Weight	% solid	Recalculated Results	Reported Results
500-6651-1	Lead	JPL3-AP20(0.5)	0.13263	100	1	1.12	90.8	13.10	13
500-6651-1	Lead	JPL3-AP29(0.5)	0.13128	100	1	1.04	88.5	14.27	14
500-6687-1	Lead	JPM4-AP64(0.5)	0.14017	100	1	1.02	78.2	17.53	18
500-6713-1	Arsenic	JPL3-CONCRETE	0.00446	100	1	1.02	96.6	0.45	2.2
500-6713-1	Barium	JPL3-CONCRETE	0.07024	100	1	1.02	96.6	7.10	35
500-6713-1	Cadmium	JPL3-CONCRETE	0.00026	100	1	1.02	96.6	0.03	<1.0
500-6713-1	Chromium	JPL3-CONCRETE	0.01862	100	1	1.02	96.6	1.88	9.4
500-6713-1	Lead	JPL3-CONCRETE	0.01877	100	1	1.02	96.6	1.90	9.5
500-6713-1	Selenium	JPL3-CONCRETE	0.00108	100	1	1.02	96.6	0.11	<5.1
500-6713-1	Silver	JPL3-CONCRETE	0.00025	100	1	1.02	96.6	0.03	<2.5
500-6714-1	Copper	JPL3-AP30(0.5)	0.24380	100	1	1.18	83.8	24.75	25
500-6714-1	Lead	JPL3-AP30(0.5)	0.15473	100	1	1.18	83.8	15.70	16
500-6714-1	Zinc	JPL3-AP30(0.5)	0.63914	100	1	1.18	83.8	64.87	65 B
500-6743-1	Copper	JPL3-AP33(0.5)	0.17944	100	1	1.03	91.3	19.01	19
500-6812-1	Arsenic	JPL3-AF25(2)	0.10822	100	1	1.05	85.8	12.03	12
500-6812-1	Barium	JPL3-AF25(2)	0.83115	100	1	1.05	85.8	92.40	92
500-6812-1	Copper	JPL3-AF25(2)	0.25393	100	1	1.05	85.8	28.23	28
500-6812-1	Lead	JPL3-AF25(2)	0.17250	100	1	1.05	85.8	19.18	19
500-6812-1	Zinc	JPL3-AF25(2)	0.74071	100	1	1.05	85.8	82.34	82 B
500-6812-1	Arsenic	JPL3-AF26(2)	0.10385	100	1	1.10	89.3	10.57	11
500-6812-1	Barium	JPL3-AF26(2)	1.04130	100	1	1.10	89.3	106.02	110
500-6812-1	Copper	JPL3-AF26(2)	0.30114	100	1	1.10	89.3	30.66	31
500-6812-1	Lead	JPL3-AF26(2)	0.26377	100	1	1.10	89.3	26.85	27
500-6812-1	Zinc	JPL3-AF26(2)	1.03010	100	1	1.10	89.3	104.88	100
500-6900-1	Lead	JPL2-CP95(0.5)	2.17080	100	1	1.12	73.8	263.57	260
500-7047-1	Arsenic	JPL3-SP1(0.5)	0.06288	100	1	1.08	73.9	7.85	7.9
500-7047-1	Barium	JPL3-SP1(0.5)	1.30380	100	1	1.08	73.9	162.86	160
500-7047-1	Chromium	JPL3-SP1(0.5)	0.12722	100	1	1.08	73.9	15.89	16
500-7047-1	Copper	JPL3-SP1(0.5)	0.31585	100	1	1.08	73.9	39.45	39 B
500-7047-1	Lead	JPL3-SP1(0.5)	0.33902	100	1	1.08	73.9	42.35	42
500-7047-1	Silver	JPL3-SP1(0.5)	0.00325	100	1	1.08	73.9	0.41	0.41 J
500-7047-1	Zinc	JPL3-SP1(0.5)	0.92552	100	1	1.08	73.9	115.61	120 B
500-7047-1	Arsenic	JPL3-SP5(0.5)	0.11774	100	1	1.13	76.5	13.57	14
500-7047-1	Barium	JPL3-SP5(0.5)	1.42890	100	1	1.13	76.5	164.70	160
500-7047-1	Chromium	JPL3-SP5(0.5)	0.19643	100	1	1.13	76.5	22.64	23
500-7047-1	Copper	JPL3-SP5(0.5)	1.44390	100	1	1.13	76.5	166.43	170
500-7047-1	Lead	JPL3-SP5(0.5)	1.57610	100	1	1.13	76.5	181.66	180
500-7047-1	Silver	JPL3-SP5(0.5)	0.01738	100	1	1.13	76.5	2.00	2.0
500-7047-1	Zinc	JPL3-SP5(0.5)	3.68830	100	1	1.13	76.5	425.12	430
500-7026-1	Lead	JPM4-DEMO DEBRIS-100507	0.00464	100	1	1.06	95.6	0.46	0.46
500-7145-1	Lead	JPM4-POST-SB1-NW	0.16066	100	1	1.02	84.7	18.52	19
500-7513-1	Lead	JPL2-AP149(0.5)	0.38483	100	1	1.07	89.9	39.82	40
500-7513-1	Lead	JPL2-AF65(1)	2.20480	100	1	1.11	83.5	237.99	240
500-14347	Antimony	JPL5-RS-AP1(0.5)	0.00192	100	1	1.03	90.4	0.21	<2.1
500-14347	Arsenic		0.10481	100	1	1.03	90.4	11.24	11
500-14347	Cadmium		0.00411	100	1	1.03	90.4	0.44	0.44
500-14347	Chromium		0.16466	100	1	1.03	90.4	17.66	18
500-14347	Copper		0.24973	100	1	1.03	90.4	26.78	27
500-14347	Lead		0.17421	100	1	1.03	90.4	18.68	19
500-14347	Zinc		0.57581	100	1	1.03	90.4	61.74	62
500-14347	Thallium		0.00884	100	1	1.03	90.4	0.95	0.44
500-14347	Antimony	JPL5-RS-AP2(0.5)	0.00157	100	1	1.13	88.1	0.16	<2.0
500-14347	Arsenic		0.08279	100	1	1.13	88.1	8.33	8.3
500-14347	Cadmium		0.00432	100	1	1.13	88.1	0.43	0.43
500-14347	Chromium		0.16638	100	1	1.13	88.1	16.73	17
500-14347	Copper		0.22238	100	1	1.13	88.1	22.37	22
500-14347	Lead		0.12996	100	1	1.13	88.1	13.07	13
500-14347	Zinc		0.51923	100	1	1.13	88.1	52.22	52
500-14347	Thallium		0.01464	100	1	1.13	88.1	1.47	0.56
500-14347	Antimony	JPL5-RS-AP3(0.5)	0.00607	100	1	1.12	89.9	0.60	0.6
500-14347	Arsenic		0.09035	100	1	1.12	89.9	8.97	9.0
500-14347	Cadmium		0.00478	100	1	1.12	89.9	0.47	0.47
500-14347	Chromium		0.17189	100	1	1.12	89.9	17.07	17
500-14347	Copper		0.23734	100	1	1.12	89.9	23.57	24
500-14347	Lead		0.14323	100	1	1.12	89.9	14.23	14
500-14347	Zinc		0.54596	100	1	1.12	89.9	54.23	54
500-14347	Thallium		0.01721	100	1	1.12	89.9	1.71	<0.20

Appendix N-2

TCLP Metals Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 1 of 2)

Laboratory: Severn TrentICP sample results = $A * B * C / D$

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Wet weight of sample

SDG	Analyte	Sample Identification	ICP/AA reading	Final Volume	Dilution Factor	Sample Volume	Recalculated Results	Reported Results
Groundwater Samples (mg/L)								
248312	Lead	JPM3-ITF-AP2	0.16577	50	1	50	0.166	0.17
248312	Lead	JPM3-ITF-AP3	0.01408	50	1	50	0.014	0.014 B
248312	Lead	JPM3-ITF-AP4	0.01718	50	1	50	0.017	0.017 B
248312	Lead	JPM3-ITF-AP44(1)	0.02107	50	1	50	0.021	0.021 B
248312	Lead	JPM3-ITF-AF87(2)	0.19311	50	1	50	0.193	0.19
248135	Lead	JPM3-ITF-AF75(2)	0.01973	50	1	50	0.020	0.02
248160	Lead	JPM3-ITF-AF97(2)	0.02697	50	1	50	0.027	0.027
248182	Lead	JPM3-ITF-AF103(2)	0.04989	50	1	50	0.050	0.050 B
248208	Lead	JPM3-ITF-AP51(1)	0.05954	50	1	50	0.060	0.06
248208	Lead	JPM3-ITF-AP54(1)	0.05898	50	1	50	0.059	0.059
248233	Lead	JPM3-ITF-AF119(2)-D	0.02142	50	1	50	0.021	0.021 B
248248	Lead	JPM3-ITF-AP60(1)	0.07284	50	1	50	0.073	0.073
248271	Lead	JPM3-ITF-AF126(2)	0.02323	50	1	50	0.023	0.023
248301	Lead	JPM3-ITF-AP68(1)	0.21375	50	1	50	0.214	0.21
248315	Arsenic	JPM3-ITF-AF22(2)	0.00090	50	1	50	0.001	0.10 U
248357	Lead	JPM3-ITF-AF148(2)	0.01280	50	1	50	0.013	0.013
248423	Lead	JPM3-ITF-AF160(2)	0.15307	50	1	50	0.153	0.15
248454	Lead	JPM3-ITF-AP74(1)	0.02139	50	1	50	0.021	0.021
248537	Lead	JPM3-ITF-AP77(1)	0.00337	50	1	50	0.003	0.050 U
248926	Lead	JPM3-ITF-AF173	0.05445	50	1	50	0.054	0.054
248927	Lead	JPM12-DITCH-CP6	0.29066	50	1	50	0.291	0.29
248927	Lead	JPM12-DITCH-CP8	0.06199	50	1	50	0.062	0.062
249025	Lead	JPM3-ITF-AF195(2)	0.21687	50	1	50	0.217	0.22
249072	Lead	JPM3-ITF-AF207(2)	0.05891	50	1	50	0.059	0.059
249106	Lead	JPM3-ITF-AF200(2)	0.17560	50	1	50	0.176	0.18
249117	Lead	JPM12-DITCH-CP12	0.08360	50	1	50	0.084	0.084
249117	Lead	JPM4-CP12	0.04271	50	1	50	0.043	0.043
249117	Lead	JPM4-CP13	2.01460	50	100	50	201.460	200
249144	Lead	JPM3-CP7-18	0.30597	50	1	50	0.306	0.31
249144	Lead	JPM3-CP7-22	0.42436	50	1	50	0.424	0.42
249145	Lead	JPM4-LAGOON-1(1)	0.48239	50	1	50	0.482	0.48
249145	Lead	JPM4-LAGOON-2(1)	2.38520	50	1	50	2.385	2.4
249220	Lead	JPM4-CP4(1)	0.18352	50	1	50	0.184	0.18
249220	Lead	JPM4-CP5(1)	0.02999	50	1	50	0.030	0.03 B
249477	Lead	JPM3-ITF-AF236(2)	0.15032	50	1	50	0.150	0.15
249221	Lead	JPM4-CP31(.5)	0.08396	50	1	50	0.084	0.084
249239	Lead	JPM3-ITF-AP90(1)	0.08565	50	1	50	0.086	0.086
249240	Lead	JPM3-ITF-AF223(2)	0.00067	50	1	50	0.001	0.0050 U
249240	Lead	JPM3-ITF-AF226(2)	-0.00051	50	1	50	-0.001	0.0050 U
249276	Lead	JPM3-ITF-AF231(2)	0.27321	50	1	50	0.273	0.27
249398	Lead	JPM3-ITF-CP1-1(1)	0.33442	50	1	50	0.334	0.33
249398	Lead	JPM3-ITF-CP1-2(1)	0.12591	50	1	50	0.126	0.13
249398	Lead	JPM3-ITF-CP1-5(1)	0.02104	50	1	50	0.021	0.021 B
249398	Lead	JPM3-ITF-CP1-6(1)	0.40588	50	1	50	0.406	0.41
249439	Lead	JPM3-ITF-AF235(2)	0.00526	50	1	50	0.005	0.0053
249439	Lead	JPM3-ITF-AF239(2)	0.02667	50	1	50	0.027	0.027
249487	Lead	JPM3-ITF-AF245(2)	0.00499	50	1	50	0.005	0.050 U
249510	Lead	JPM3-ITF-CP-1-22(.5)	11.66300	50	1	50	11.663	12
249511	Lead	JPM12-CP9(.5)	0.01089	50	1	50	0.011	0.011 B
249544	Lead	JPM12-AP1(1)	3.20040	50	1	50	3.200	3.2
249544	Lead	JPM12-AP5(1)	0.00021	50	1	50	0.000	0.050 U
249563	Lead	JPM12-AP24(1)	3.62680	50	1	50	3.627	3.6
249563	Lead	JPM12-AP11(1)	0.01789	50	1	50	0.018	0.018 B
249576	Lead	JPM12-AF5(2)	0.02167	50	1	50	0.022	0.022 B
249602	Lead	JPL2-ASH	4.61660	50	1	50	4.617	4.6
249603	Lead	JPL2-CP26(1)	0.08005	50	1	50	0.080	0.08
249616	Lead	JPM12-AP31(1)	0.00441	50	1	50	0.004	0.050 U
249616	Lead	JPM12-AP34(1)	0.02455	50	1	50	0.025	0.025 B
249623	Lead	JPM12-AP45(1)	0.40315	50	1	50	0.403	0.40
249623	Lead	JPM12-AP46(1)	2.72900	50	1	50	2.729	2.7
249634	Lead	JPM12-AP56(1)	0.00047	50	1	50	0.000	0.050 U
249645	Lead	JPM12-AP65(1)	0.04610	50	1	50	0.046	0.046
249674	Lead	JPM12-AP69(1)	0.00489	50	1	50	0.005	0.050 U
249743	Lead	JPM12-AP82(1)	0.00620	50	1	50	0.006	0.0062 B
249754	Lead	JPM4-AP3(1)	0.02760	50	1	50	0.028	0.028 B
249776	Lead	JPM4-LEAD A21 DE LAGOON EXCAVATION	0.04271	50	1	50	0.043	0.043
249777	Lead	JPM4-AF6(2)	1.52190	50	100	50	152.190	150
249777	Lead	JPM4-AF4(2)	2.82370	50	1	50	2.824	2.8

SDG - sample delivery group
mg/L - milligram per liter

Appendix N-2

TCLP Metals Sample Result Calculation Verification

Joliet Army Ammunition Plant
SRU2 and SRU3 LAP

(Page 2 of 2)

Laboratory: Severn TrentICP sample results = $A * B * C / D$

where:

A = mg/L results

B = Final Volume, mls

C = Dilution Factor

D = Wet weight of sample

SDG	Analyte	Sample Identification	ICP/AA reading	Final Volume	Dilution Factor	Sample Volume	Recalculated Results	Reported Results
249895	Lead	JPM12-AP84(1)	0.00260	50	1	50	0.003	0.050 U
249895	Lead	JPM12-AP85(1)	0.20381	50	1	50	0.204	0.20
249945	Lead	JPM3-STOCKPILE-TCLP	0.15993	50	1	50	0.160	0.16
249973	Lead	JPM3-ITF-AF250(3)	0.52826	50	1	50	0.528	0.53
250023	Lead	JPM12-HUMP2(1)	0.02609	50	1	50	0.026	0.050 U
250056	Lead	JPM3-ITF-AF254(3)	0.10623	50	1	50	0.106	0.11
250104	Lead	JPL3-CP1(1)	0.00730	50	1	50	0.007	0.0074 B
250183	Lead	JPM3-ITF-AF259(2)	0.00078	50	1	50	0.001	0.050 U
250192	Lead	JPM12-AP86(1)	1.75990	50	1	50	1.760	1.8
250263	Lead	JPL2-AP55(1)	0.02727	50	1	50	0.027	0.027 B
250415	Lead	JPL2-AP99(0.5)	0.25971	50	1	50	0.260	0.26
250472	Lead	JPL23A-AP1(1)	0.00395	50	1	50	0.004	0.050 U
250473	Antimony	JPL23A-WATER	0.17929	50	1	50	0.179	0.18
250473	Barium	JPL23A-WATER	0.38659	50	1	50	0.387	0.39
250473	Chromium	JPL23A-WATER	0.08315	50	1	50	0.083	0.083
250473	Lead	JPL23A-WATER	1.35800	50	1	50	1.358	1.4
250473	Zinc	JPL23A-WATER	2.98800	50	1	50	2.988	3.0
250541	Lead	JPL23A-AP17(1)	0.01502	50	1	50	0.015	0.015 B
250548	Lead	JPM12-STOCKPILE-1(0)	0.42082	50	1	50	0.421	0.42
250561	Lead	JPM12-STOCKPILE-1(0)	0.36808	50	1	50	0.368	0.37
250586	Lead	JPL23A-SP2(0.5)	0.05063	50	1	50	0.051	0.051
500-4598-2	Arsenic	JPM4-EXCAVATION WATER	-0.00077	50	1	50	-0.001	0.01
500-4598-2	Cadmium	JPM4-EXCAVATION WATER	0.00003	50	1	50	0.000	0.002
500-4598-2	Copper	JPM4-EXCAVATION WATER	0.00236	50	1	50	0.002	0.0024 J
500-4598-2	Lead	JPM4-EXCAVATION WATER	0.01794	50	1	50	0.018	0.018
500-4598-2	Silver	JPM4-EXCAVATION WATER	0.00107	50	1	50	0.001	0.0011 JB
500-4598-2	Zinc	JPM4-EXCAVATION WATER	0.00645	50	1	50	0.006	0.0064 J
500-5122-1	Lead	JPM4-AF7(1)	8.23130	50	10	50	82.313	82
500-5286-2	Lead	JPM4-AP15(0.5)	2.03530	50	10	50	20.353	20
500-5286-2	Lead	JPM4-AP20(0.5)	0.02349	50	1	50	0.023	0.023 J
500-5529-1	Arsenic	JPL3-DITCH-1(0)	-0.00351	50	1	50	-0.004	0.05
500-5427-1	Arsenic	JPL2-STORMWATER-US#5	-0.00047	50	1	50	0.000	0.01
500-5427-1	Barium	JPL2-STORMWATER-US#5	0.04493	50	1	50	0.045	0.045
500-5427-1	Cadmium	JPL2-STORMWATER-US#5	-0.00035	50	1	50	0.000	0.002
500-5427-1	Copper	JPL2-STORMWATER-US#5	0.00250	50	1	50	0.003	0.0025 J
500-5427-1	Lead	JPL2-STORMWATER-US#5	0.00161	50	1	50	0.002	0.005
500-5427-1	Silver	JPL2-STORMWATER-US#5	0.00124	50	1	50	0.001	0.0012 J
500-5427-1	Zinc	JPL2-STORMWATER-US#5	0.01417	50	1	50	0.014	0.014 JB
500-5658-1	Lead	JPM4-AF9(4)	0.27404	50	1	50	0.274	0.27
500-5718-1	Lead	JPM4-SB-1-RAW-8/2	0.03146	50	1	50	0.031	0.031
500-5767-1	Lead	JPM4-AP21(0.5)	23.98600	50	20	50	479.720	480
500-5767-1	Lead	JPM4-AP23(0.5)	0.04461	50	1	50	0.045	0.045
500-5767-1	Lead	JPM4-AP30(2)	0.07453	50	1	50	0.075	0.075
500-5974-1	Lead	JPM4-AP26(2)	0.56507	50	1	50	0.565	0.57
500-6015-1	Lead	JPL5-AP1(0.5)	0.03688	50	1	50	0.037	0.037 J
500-6053-1	Lead	JPM4-AP32(0.5)	0.02761	50	1	50	0.028	0.028
500-6091-1	Lead	JPL3-TOPSOIL	0.01326	50	1	50	0.013	0.013 J
500-6111-1	Lead	JPM4-AP50(0.5)	12.12200	50	1	50	12.122	12
500-6111-1	Lead	JPM4-AP57(0.5)	0.34370	50	1	50	0.344	0.34
500-6235-1	Arsenic	JPL5-SP4(1)	-0.00022	50	1	50	0.000	<0.050
500-6088-1	Arsenic	JPM4-STORMWATER-US#6	-0.00566	50	1	50	-0.006	<0.010
500-6088-1	Cadmium	JPM4-STORMWATER-US#6	0.00018	50	1	50	0.000	<0.0020
500-6088-1	Copper	JPM4-STORMWATER-US#6	0.00708	50	1	50	0.007	0.0071 J
500-6088-1	Lead	JPM4-STORMWATER-US#6	0.00350	50	1	50	0.004	0.0035 J
500-6088-1	Silver	JPM4-STORMWATER-US#6	0.00013	50	1	50	0.000	<0.0050
500-6088-1	Zinc	JPM4-STORMWATER-US#6	0.01383	50	1	50	0.014	0.014
500-6089-1	Arsenic	JPL3-STORMWATER-US#6	-0.00296	50	1	50	-0.003	<0.010
500-6089-1	Barium	JPL3-STORMWATER-US#6	0.05616	50	1	50	0.056	0.056
500-6089-1	Chromium	JPL3-STORMWATER-US#6	0.00240	50	1	50	0.002	0.0024 J
500-6089-1	Copper	JPL3-STORMWATER-US#6	0.01397	50	1	50	0.014	0.014
500-6089-1	Lead	JPL3-STORMWATER-US#6	0.01445	50	1	50	0.014	0.014
500-6089-1	Silver	JPL3-STORMWATER-US#6	0.00063	50	1	50	0.001	<0.0050
500-6089-1	Zinc	JPL3-STORMWATER-US#6	0.04476	50	1	50	0.045	0.045
500-6750-1	Lead	JPL3-AP28(0.5)	0.01686	50	1	50	0.017	0.017
500-7025-1	Lead	JPL2-CP95(0.5)	0.02590	50	1	50	0.026	0.026 J
500-7162-1	Lead	JPL3-SP4(0.5)	0.04209	50	1	50	0.042	0.042
500-7607-1	Lead	JPL2-AF65(1)	0.07225	50	1	50	0.072	0.072

SDG - sample delivery group
mg/L - milligram per liter